

Asbestos Management Program

The George Washington University



Table of Contents

Table of Contents	2
INTRODUCTION	4
Definitions	5
1. Roles and Responsibilities	6
A. Program Management	6
B. Program Designated Review	6
C. Environmental Health and Safety	6
2. Occupant Notification	8
A. Inform of ACM Presence	8
B. Locations of ACM	9
C. Locations of ACM	9
D. Notification Procedures	10
3. Monitoring the Condition of ACM	11
A. Frequency of Inspection	11
B. Inspection Methodology	11
C. Documentation	11
4. Job Site Controls for Work Involving ACM	11
A. Work Notification	11
B. Assignment of Protective Work Practices	12
C. Contractors	13
5. Safe Work Practices	14
A. Application of Special Work Practices	14
B. Basic Procedures	14
C. Worker Personal Protective Equipment (PPE)	15
D. Special Cleaning Techniques	15
E. Procedures for Asbestos Fiber Release Episodes	15
6. Training	16
A. Awareness Training	16
B. Specialized Training	16
Appendix A: Asbestos-Containing Materials at The George Washington University	19



Appendix B: Asbestos Abatement Notice 22

Appendix C: Carpet Installation/Replacement Sheet 24

Appendix D: Floor Tile Safety Fact Sheet 26



INTRODUCTION

The University has prepared this program to provide guidance to students, faculty, staff, building occupants, contractors, and visitors for the safe management of asbestos-containing material (ACM) present on university property, whether presumed, suspected, or identified. This document details the methods of the program, by which the University will manage all asbestos-related activities, including but not limited to inspections, sampling, notifications, training, recordkeeping, project design, planning, supervision, abatement, and clearance activities.



Definitions

Asbestos: Any naturally occurring, hydrated mineral silicate separable into commercially usable fibers, including chrysotile (serpentine), amosite (cummingtonite-grunerite), crocidolite (riebeckite), tremolite, anthophyllite and actinolite, that is recognized by a Federal, state, or local regulatory authority.

Asbestos-Containing Material (ACM): Any material containing greater than one percent (1%) asbestos, also known as Asbestos Material.

Friable Asbestos: Any material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure, or is capable of being released into the air by hand pressure.

Non-Friable Asbestos: Materials that when dry cannot be easily crumbled, pulverized, or reduced to powder by hand pressure. These materials include solids (e.g. transite cement board, flooring) and other organically bonded materials (e.g. adhesives, caulking, mastics, and roofing) and do not normally release airborne fibers unless subjected to cutting, sanding, or grinding.

Asbestos Survey: A thorough inspection for and identification of all presumed asbestos containing materials (PACM), suspect ACM, or asbestos material throughout the building/structure or portion thereof to be demolished, renovated, remodeled, or repaired.

Asbestos Abatement: Any portion of an asbestos project that includes procedures to control fiber release from asbestos containing material. This includes removal, encapsulation, enclosure, repair, or handling of asbestos material that may result in the release of asbestos fiber.

Presumed Asbestos-Containing Materials (PACM): All Thermal System Insulation (TSI) and surfacing materials found in buildings constructed no later than 1980. PACM is considered to be ACM unless proven otherwise by appropriate bulk sampling and laboratory analyses.

Suspect Miscellaneous ACM: Any suspect asbestos-containing material that is not PACM, such as floor tiles, ceiling tiles, mastics/adhesives, sealants, roofing materials, cementitious materials, etc. All suspect miscellaneous ACM must be assumed to be ACM, unless proven otherwise by appropriate bulk sampling and laboratory analyses.



1. Roles and Responsibilities

A. Program Management

GW Environmental Health and Safety, in coordination with the Division of Safety and Operations management team, are responsible for the implementation of the program throughout the University.

1. This program provides safe working, learning, and living environments for all students, faculty, staff, visitors, occupants, and contractors, free of ACM hazards.
2. Sufficient resources are available to execute this program, to include personnel, equipment, materials and related.
3. All stakeholders are promptly informed of and protected from potential ACM hazards.
4. All ACM response and corrective actions control or eliminate ACM hazards at the University.
5. Maintain ACM hazard information with current data to allow decision makers to be informed of and respond to any changing conditions of ACM or potential ACM hazards.

B. Program Designated Review

At GW, the Director of Environmental Health and Safety is responsible for implementation of the asbestos program on behalf of the University.

1. Individually responsible for the asbestos management program to be implemented by University personnel and any other individuals covered by this plan.
2. Maintains sufficient knowledge and experience regarding ACM.
3. Manages day-to-day operations of the program, including but not limited to, abatement activities, surveys, laboratory analysis, and air sampling contracts.
4. Collects and maintains all program documentation and updates program data, when necessary.

C. Environmental Health and Safety

University Environmental Health and Safety (EHS) staff are responsible for implementing the day-to-day operational aspects of the program, including:

1. Provide support to the project manager for asbestos abatement projects with all stakeholders.
2. Provide support to the project manager for asbestos emergency response and corrective actions for unplanned situations.
3. Validate the performance of asbestos repair and removal projects with University-approved contractor.



4. Coordinate collection of bulk samples of PACM and suspect materials to determine asbestos content, as needed.
5. Schedule and lead asbestos awareness training for FPCM staff.
6. Provide technical assistance/guidance in the execution of abatement activities, surveys, laboratory analysis, and air sampling contracts.

D. Facilities Planning, Construction, and Management (FPCM)

1. Prior to any maintenance work or renovations of University property where ACM, suspect ACM or PACM may be disturbed, the project manager or designee shall coordinate an asbestos survey, utilizing guidance from EHS. Employees must not be assigned to work in these areas until the survey is complete and EHS has cleared the area.
2. FPCM staff must notify EHS in a timely fashion if damaged PACM, suspect ACM, or ACM is discovered during the execution of their assigned work tasks.
3. FPCM staff shall limit access to any areas containing damaged ACM.
4. Issue notifications and oversees the posting of Asbestos Abatement Notices at entrances to and near the abatement site. The notification form is provided in Appendix B.
5. Maintains required documentation, including notifications, project logs, air and bulk sampling results, and waste manifests for regulatory purposes.

E. Housekeeping

Housekeeping will take proper precautions when working with known or suspect asbestos-containing flooring material including the following safety measures:

1. Never sand asbestos-containing flooring material.
2. Stripping of finishes is conducted using low abrasion pads at speeds lower than 300 revolutions per minute (rpm) and wet methods.
3. Burnishing or dry buffing may be performed only on asbestos-containing flooring which has sufficient finish so that the pad cannot contact the asbestos-containing material.
4. Never dust, dry-sweep, or vacuum debris on flooring in an area with damaged thermal systems insulation or surfacing material such as acoustical ceiling or textured ceiling paint.
5. Avoid scraping floor tiles when moving furniture.
6. Complete two-hour asbestos awareness training to learn to identify materials that could be ACM and protect themselves from possible exposure.

F. All University Departments and Employees

1. In annual training, staff shall be informed of the presence and location of PACM, suspect ACM, and ACM in their work areas and how and why to avoid disturbing ACM.



2. Staff should assume that all building materials contain asbestos unless laboratory testing or a previous survey proves otherwise. Staff shall not disturb ACM, suspect ACM or PACM. For example, do not remove loose or damaged floor tile. Do not dry sweep or vacuum suspect debris, and do not drill holes or hammer nails in asbestos-containing ceilings or other ACM.
3. Staff shall report damaged and/or deteriorated ACM, suspect ACM or PACM to their Supervisor. Supervisor or designee reports this information to Environmental Health and Safety (EHS) at Safety@gwu.edu or 202-994-4347. To recognize this damage or deterioration, by material type:
 - Floor tiles - look for cracked, broken or chipped tiles
 - Thermal insulation - look for debris near the insulation and exposed areas
 - Fireproofing - look for debris and delamination
 - Other PACM - look for debris near the material; stains, cracks, scrapes, marks; or missing or dislodged material
4. Any staff that may have ACM present in their work area shall enroll in and complete two-hour asbestos awareness training (OSHA). Staff is required to report damaged and/or deteriorated ACM, suspect ACM or PACM, to EHS or Designated Person.

G. Contractors

1. Prior to performing any work that may disturb building materials on campus, contractors shall be notified of the presence or potential presence of ACM in their work areas. Contractor employees should be provided with survey information when available for work in areas known or suspected to contain ACM.
2. Contractor employees shall notify University staff in the event that damaged ACM is discovered during their work, or if their work inadvertently disturbs materials that may be ACM.

2. Occupant Notification

OSHA requires that building owners inform building workers, occupants, and tenants about the location and physical condition of ACM, and stress the need to avoid disturbing the material.

A. Inform of ACM Presence

Occupants, including workers, staff, and others, shall be informed of the following information to the extent that they reflect building conditions:

1. ACM has been found in the building and is located in areas where the material could be disturbed.



2. The condition of the ACM, and the response that is appropriate for that condition.
3. Asbestos only presents a health risk when fibers become airborne and are inhaled. The mere presence of intact ACM may not represent a health risk.
4. Where the ACM is found in the building (refer to Section B. of this part and Appendix A).
5. Do not disturb the ACM (e.g. do not push furniture against the ACM, do not damage thermal system insulation (TSI)).
6. Report any evidence of disturbance or damage of ACM to EHS.
7. Report any dust or debris that might come from the ACM or suspect ACM, any change in the condition of the ACM, or any improper action (relative to ACM) of building personnel to EHS
8. Appropriate personnel will take special precautions during their work to properly address any asbestos debris and to avoid disturbing ACM.
9. All ACM is inspected periodically and additional measures will be taken if needed to protect the health of building occupants

B. Locations of ACM

1. Specific locations of ACM on campus are provided in Appendix A. All other building materials shall be assumed to contain asbestos unless proven otherwise through laboratory analysis.
2. Mechanical rooms, ceiling plenums, steam tunnels, and manholes may contain thermal systems insulation which may contain asbestos. Some locations have asbestos-containing sprayed-on fireproofing.
3. Offices, corridors, pre-1980 dormitories and classrooms may contain non-friable floor tile and associated mastic (glue), pipe insulation (usually above ceiling tiles or inside walls), textured ceiling paint, acoustical ceilings and fire doors.
4. Laboratories may contain asbestos-containing bench tops, transite panels in fume hoods, floor tile and associated mastic, and pipe fitting insulation.

C. Locations of ACM

1. Specific locations of ACM on campus are provided in Appendix A. All other building materials shall be assumed to contain asbestos unless proven otherwise through laboratory analysis.
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4. Laboratories may contain asbestos-containing bench tops, transite panels in fume hoods, floor tile and associated mastic, and pipe fitting insulation.



D. Notification Procedures

1. Reporting Damaged Suspect, Assumed, or Known ACM - Supervisors or designee shall report damaged and/or deteriorated ACM or PACM for abatement through the maintenance work order system (i.e. FixIt).
2. Renovation Surveys - Prior to any renovation, contact EHS at Safety@gwu.edu or 202-994-4347 to coordinate the survey to identify ACM, PACM and suspect asbestos materials.
3. Asbestos Abatement
 - a. The FPCM Project Manager must arrange and perform a job site walk-through with abatement contractors.
 - b. Building Managers or Project Manager must provide EHS with all notification information regarding the planned asbestos abatement project at least 30 calendar days prior to the start of the abatement. Information must include:
 - i. Exact location
 - ii. Start and completion dates of scheduled work
 - iii. Type of abatement
 - iv. Quantity of type of ACM to be abated
 - v. Abatement technique(s)
 - vi. Reason for abatement
 - vii. Asbestos contractor (full name and address, phone)
 - viii. Contractor's DDOE Asbestos Handlers License number
 - ix. Contractor's Project Supervisor (full name and phone)
 - x. Air Sampling Company (full name and address, phone)
 - xi. Analytical Laboratory (full name and address, phone)

Note: The District of Columbia requires a written notification of asbestos abatement projects a minimum of ten (10) calendar days prior to commencement of work. In addition, the building owner is required to notify occupants at least 30 calendar days prior to commencement of the work. Certain projects will require a permit from the Department of Energy and the Environment (DOEE) and associated fees.

- c. Project managers shall ensure that Asbestos Abatement Notices are posted in and around the abatement location ten (10) days in advance of the start of the abatement. DOEE requires a minimum of three (3) days advanced posting for abatement work performed in the vicinity of occupied locations.
- d. The Asbestos Project Monitor company will be onsite throughout the duration of the abatement project providing updates to EHS.



3. Monitoring the Condition of ACM

A visual reinspection of all ACM will be conducted at regular intervals as part of the program to help ensure that any ACM damage or deterioration will be detected, and corrective action taken.

A. Frequency of Inspection

Asbestos Hazard Emergency Response Act (AHERA) regulations require comprehensive re-inspections every three (3) years. However, the University is not directly covered by AHERA. Reinspection of ACM at the University is recommended every three (3) years. AHERA requires these inspections to be performed by accredited and/or licensed asbestos inspectors. Periodic inspections (surveillance checks) are required by AHERA every six (6) months. These inspections can be performed by maintenance staff or others familiar with ACM at each site.

B. Inspection Methodology

EPA recommends a visual and physical evaluation of ACM during the reinspection to note the current condition and physical characteristics of the ACM. Through this reinspection, it is possible to determine both the relative degree of damage and assess the likelihood of future fiber release.

C. Documentation

Inspectors shall note any changes in the condition of ACM as each building. The designated person and EHS shall be immediately notified of any areas of significant damage or conditions that may expose occupants to asbestos hazards (e.g. debris).

4. Job Site Controls for Work Involving ACM

The program includes a system of job-site controls to monitor all work that could disturb ACM.

A. Work Notification

The first part of the program requires the person requesting the work to submit a job request form for maintenance or renovation to the asbestos designated person or EHS before any work commences. The form gives the time and location of the requested work, the type of maintenance needed, and available information about any ACM in the vicinity of the requested work. The contractor or other person authorized to perform the work should be identified on the form. Please refer to previous "Occupant Notification – Notification Procedures" for details.



1. Upon receiving a pre-work job request form, the designated person or EHS shall take the following steps:
 - a. Refer to written records, building plans and specifications, and any building ACM inspection reports to determine whether ACM is present in the area where work will occur. If ACM is present, but it is not anticipated that the material will be disturbed, the designated person/EHS shall note the presence of the ACM on the job request form and provide additional instruction on the importance of not disturbing the ACM.
 - b. If ACM is both present and likely to be disturbed, the designated person/EHS or a designated supervisor qualified by training or experience, should visit the site and determine what work practices should be instituted to minimize the release of asbestos fibers during the maintenance activity. This determination should be recorded on the maintenance work authorization form which is then sent to the in-house maintenance supervisor or to the maintenance contractor to authorize the work.
 - c. The project manager should make sure that a copy of both the job request form and the maintenance work authorization form (if granted) are placed in the permanent file.
 - d. Upon completion of the work, EHS shall ensure that a copy of the evaluation of work affecting asbestos-containing materials form is placed in the permanent asbestos file for the building and available in AiM.

B. Assignment of Protective Work Practices

Where the task is not covered by previously approved standard work practices, the designated person/EHS should ensure that the appropriate work practices and protective measures are used for the job.

1. Visit the Site. For all jobs where contact with ACM is likely, the APM or a designated supervisor qualified by training or experience should visit the work site when the work begins to see that the job is being performed properly. For lengthy jobs where disturbance of ACM is intended or likely, periodic inspections should be made for the duration of the project.
2. Evaluate the Work. The designated person's/EHS observations should be provided on an evaluation of work affecting asbestos-containing materials form. Any deviation from standard and approved work practices should be recorded immediately on this form and the practices should be immediately corrected.



C. Contractors

The program will also address work conducted by outside contractors.

1. Contracts with service trades or abatement companies should include the following provisions to ensure that the service or abatement workers can and will follow appropriate work practices:
 - a. Proof that the contractor's workers have been properly notified about ACM in the owner's building and that they are properly trained and accredited (if necessary) to work with ACM.
 - b. Copies of documentation of use of respiratory protection, medical surveillance, and worker training as required by OSHA, EPA, and/or state regulatory agencies.
 - c. Notification to building tenants and visitors that abatement activity is underway (performed by owner).
 - d. Submission of written work practices by the vendor or contractor to the designated person/EHS for approval or modification. The vendor or contractor should then agree to abide by the work practices as finally accepted by the designated person/EHS.
 - e. Assurance that the contractor will use proper work area isolation techniques, proper equipment, and required waste disposal practices.
 - f. Historical air monitoring data for representative examples of the contractor's previous projects, with emphasis on projects similar to those likely to be encountered in the building.
 - g. Provision for inspections of the area by the owner's representative to ensure that the area is acceptable for re-entry of occupants/tenants.
 - h. Evaluation of qualifications for each abatement contractor/supervisor or maintenance crew chief, known as the "competent person" in the OSHA standard and EPA Worker Protection Rule.
 - i. Criteria for determining successful completion of the work (i.e. visual inspections and air monitoring).
 - j. Notification to EPA and DOEE when the abatement project is large enough to trigger asbestos NESHAP requirements (260 linear feet, 160 square feet or 3 cubic feet of asbestos material).
 - k. Submission of air monitoring results to DOEE for NESHAP-sized projects in or near occupied facilities.



5. Safe Work Practices

The program includes provisions for specialized work practices for custodial, maintenance, and construction staff.

A. Application of Special Work Practices

Implementation of key work practices should be based on the likelihood of disturbing ACM and releasing fibers.

1. The nature and extent of any special work practices for custodial, maintenance, and construction staff should reflect the likelihood that the ACM will be disturbed and that fibers will be released. Maintenance activities can be divided into three categories with regard to their potential for disturbing ACM.
 - a. Those which are unlikely to involve any direct disturbance of ACM; for example, cleaning shelves or counter tops with a damp cloth.
 - b. Those which may cause accidental disturbance of ACM; for example, working on a fixture near a ceiling with surfacing ACM.
 - c. Those which involve intentional small-scale manipulation or disturbance of ACM; for example, removing a small segment of thermal system insulation (TSI) ACM to repair a pipe leak.
2. Activities beyond maintenance activities (or small-scale short duration activities) should be performed only by specially trained and accredited asbestos professionals.
3. University staff are prohibited from intentionally disturbing ACM during the course of their work as this activity would require additional training, medical monitoring, and potentially obtaining a license to perform such work.

B. Basic Procedures

Basic procedures shall be used to perform routine custodial and maintenance tasks that may involve ACM.

1. Wet methods (such as applying water to ACM with a low-pressure sprayer).
2. Use of mini enclosures.
3. Use of portable power tools equipped with special local ventilation attachments.
4. Area isolation.
5. Avoiding certain activities, such as sawing, sanding, and drilling ACM.



C. Worker Personal Protective Equipment (PPE)

PPE will be used that ensures custodial and maintenance staff are adequately protected from asbestos exposure.

D. Special Cleaning Techniques

Specialized techniques are required to clean up asbestos fibers on a routine basis.

1. Wet Cleaning – Proper cleaning will involve the use of wet cleaning or wet-wiping practices to pick up asbestos fibers. Dry sweeping or dusting can result in asbestos fibers being re-suspended into the building's air and therefore should not be used. Once wet cloths, rags, or mops have been used to pick up asbestos fibers, they should be properly discarded as asbestos waste while still wet. They should not be allowed to dry out, because the collected fibers might be released at some later time when disturbed.
2. High-Efficiency (HEPA) Vacuuming – The use of special vacuum cleaners may be used as an alternative to wet cleaning in certain situations. These vacuums are equipped with filters designed to remove very small particles or fibers, such as asbestos, by filtering those particles from the air passing through the vacuum.
3. Carpet Installation/Replacement and Floor Tile - Safety Fact Sheets (Appendices C and D) contain detailed information on proper carpet replacement procedures. Following these guidelines prevents the disturbance of asbestos containing flooring and/or associated mastic.

E. Procedures for Asbestos Fiber Release Episodes

If moderate to relatively large amounts of ACM are disturbed, the University will implement these procedures to address the hazard.

1. Procedure Determination – The procedures to be followed will vary according to the site of the major release episode, the amount of ACM affected, the extent of fiber release from the ACM, the relationship of the release area to the air handling systems, and whether the release site is accessible to building occupants. Depending on the severity of the episode, asbestos abatement consultants and contractors may be helpful in developing a strategy for conducting the cleanup operations. EPA defines a “major fiber release episode” as an incident involving greater than three (3) square or linear feet of ACM.
2. Isolate the Area – For major fiber releases, the area should be isolated by closing doors and/or erecting temporary barriers to restrict airflow as well as access to the site. Signs should be posted as necessary, immediately outside the fiber release site to prevent persons not involved in the cleanup operation from inadvertently entering the area. If asbestos fibers could enter the heating, ventilation, and air-conditioning (HVAC) system, the system should be modified to prevent fiber entry, or should be shut down and sealed off.
3. Thoroughly Clean Area – Employ thorough cleanup procedures to properly control the ACM, including HEPA vacuuming, wet wiping, and worker protection procedures outlined in this



- program. Sufficiently wet ACM waste and properly place them in an appropriate leak-tight container (such as a properly labeled, 6-mil-thick plastic bag).
4. Clear the Work Area – Conduct a careful visual inspection and final clearance air monitoring to verify satisfactory cleanup. Ensure clearance sampling conforms to DOEE requirements.

6. Training

The program addresses awareness and specialized training as indicated below.

A. Awareness Training

1. This training is required for maintenance and custodial staff involved in cleaning and minor maintenance tasks where ACM may be accidentally disturbed, as well as staff that may come into contact with ACM in their work area.
2. Two-hour Asbestos Awareness Training shall include following topics:
 - a. Background information on asbestos
 - b. Health effects of asbestos
 - c. Worker protection programs
 - d. Locations of ACM in the building
 - e. Recognition of damage and deterioration
 - f. The program for that building
3. EHS leads asbestos awareness training and maintains the records.
4. Supervisors are responsible for ensuring that maintenance, construction and custodial staff receive initial asbestos awareness training.

B. Specialized Training

1. Specialized training is required for situations unique to the buildings and materials present on campus.
2. Flooring maintenance and carpet installation are current activities that require specialized training.



7. Recordkeeping

To document the performance of the program, in conjunction with regulatory requirements, the University shall maintain all necessary documentation related to this program.

A. Federal

1. EPA

- a. Inspection and assessment reporting – as long as data is relied upon
- b. Asbestos management program – as long as data is relied upon
- c. Fiber release documentation – University defined
- d. Work orders/forms – University defined
- e. ACM reinspection/surveillance documentation – as long as data is relied upon

2. OSHA

- a. Determination of asbestos content/ACM in buildings – as long as data is relied upon
- b. Personal air monitoring data – 30 years
- c. Medical records – duration of employment plus 30 years
- d. Training records - duration of employment plus 1 year

B. District of Columbia

Applies to all operations performed within the District of Columbia

1. Entities engaged in asbestos contracting in the District of Columbia are required to maintain documents for at least 30 years. However, the University is not bound by these requirements as it is a property owner and not an asbestos contractor. The District of Columbia has no specific recordkeeping requirements for property owners regarding asbestos. Consequently, the University will maintain asbestos information for 30 years. The University must still maintain documentation as specified by Federal agencies.



8. Forms

Campus Notification (Appendix B)

9. Relevant Standards/Code/Rules/Regulations/Statutes

- U.S. Environmental Protection Agency (EPA) 40 CFR 763 Subpart E, Asbestos in Schools
- EPA 40 CFR 61 Subpart M, National Emission Standards for Hazardous Air Pollutants for Asbestos
- Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1001, Subpart Z – Asbestos
- OSHA 29 CFR 1926.1101, Subpart Z - Asbestos
- District of Columbia Department of Energy and the Environment (DOEE), DCMR 20-8 Air Quality – Asbestos, Sulfur, Nitrogen Oxides, Lead, and Carbon Dioxide, 20-800 Control of Asbestos
- District of Columbia Department of Licensing and Consumer Protection (DLCP), Code of the District of Columbia, Subchapter VI. Asbestos Licensing and Control, Title 8, Section

10. References and Resources

Asbestos-Containing Materials at George Washington University (Appendix A)

Carpet Installation/Replacement Fact Sheet (Appendix C)

Floor Tile Safety Fact Sheet (Appendix D)



Appendix A: Asbestos-Containing Materials at The George Washington University

Asbestos was used in many types of building materials for its strong tensile, heat resistant, and chemical resistant properties. Below is a list of known or presumed asbestos containing materials at the University. Do not disturb any of these materials (i.e. do not drill, cut, sand, repair or remove these materials). Contact EHS at Safety@gwu.edu 202-994-4347 for further assistance. The information in the table below is based on a comprehensive campus asbestos survey conducted by an environmental consulting firm, and on bulk samples/observations made by EHS.

Confirmed Asbestos containing Materials at University	Potential Locations	Some Known Locations
SURFACING MATERIALS – Material that is sprayed-on, troweled-on, or otherwise applied to surfaces (such as acoustical or finish plaster on ceilings and walls, and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes)		
Fireproofing	Some University buildings	
Acoustical/Textured Ceiling Material (“popcorn” ceiling)	Some University buildings	
THERMAL SYSTEMS INSULATION – Insulation material applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat gain or loss.		
Duct, Boiler, Air handler, Tank insulation, Gaskets	All University buildings, (except buildings constructed after ~1980)	
Fitting, Elbow, Joint and Valve Insulation	All University buildings, (except buildings constructed after ~1980)	

Aircell Pipe Insulation (looks like corrugated cardboard)	Some University buildings		
White Block Pipe Insulation	Some University buildings		
Transite Air Handling Duct			
Underground Piping and Underground Pipe Insulation	University grounds, outdoors		
SUSPECT MISCELLANEOUS MATERIALS			
Floorings (visible, beneath carpet or beneath newer floor tile): 12" x 12" Floor Tile and/or Mastic (glue), 9" x 9" Floor Tile and/or Mastic, Linoleum and/or Mastic	All University buildings, (except buildings constructed after ~1980)		
Pegboard-like Transite Ceiling Panels	Some University buildings		
Fire Door Insulation	All University buildings, (except buildings constructed after ~1980)		
Vibration Isolator Cloth on Ductwork (looks like thick canvas)	All University buildings, (except buildings constructed after ~1980)		
Laboratory Bench Tops, Sinks, and Shelves	Some University buildings		
Interior Transite Panels within Fume Hoods	Some University buildings		
Transite Fume Hood Round Exhaust Ducts	Some University buildings		
Cable Arc Proofing (13.8 kV cables)	Medium voltage electrical distribution system (manholes/ vaults)		



Window and Door Caulking	All University buildings, and some dormitory buildings (except buildings constructed after ~1980)	
Roofing Materials and Flashing	Some University buildings	
Transite Louvers on Cooling Towers	Cooling Towers	
Ceiling Tile	Some University buildings	
Plaster	Some University buildings	
Sheetrock and Sheetrock Joint Compound	Some University buildings	
Mudded seam on Duct Insulation	Some University buildings	
Older mastics (glues), typically brown or black	Some University buildings	
Tar Wrapping on Pipes	Typically found on outdoor piping	

NOTE: This list is intended to be a guidance document and may not include ALL asbestos containing materials and/or ALL locations at the University. If you are aware of any incorrect information on this Fact Sheet or additional information, please contact EHS at Safety@gwu.edu or 202-994-4347.



Appendix B: Asbestos Abatement Notice

WHAT TO KNOW ABOUT ASBESTOS REMOVAL

Why have I received notice of an asbestos removal project? If a project is conducted that might impact building materials containing asbestos, then residents must be notified.

Where is the asbestos?

Most buildings built before 1980 have asbestos in some form within common building materials such as some ceiling tiles, pipe insulation, or floor tiles.

Could I be exposed to asbestos?

No. Asbestos that is in good condition and left undisturbed is highly unlikely to present a health risk. The risks from asbestos occur when it is damaged or disturbed, causing asbestos fibers to become airborne, where they can be inhaled.

Are you sure it's safe?

Yes. We are following all regulations to ensure areas that require abatement will be contained while the work is being performed. Air samples will be taken both inside and outside of the work areas during the project.

Is it safe to be in the building when the work is in progress? Yes, the work is being performed in areas with special containment to make sure no contaminants escape. Only specially trained and authorized personnel will be able to enter until the work is fully cleared.

I still have questions...

We understand you may have additional questions so please contact safety@gwu.edu if you need additional information.





NOTICE OF ASBESTOS ABATEMENT

LOCATION:

START DATE:

COMPLETION DATE:

TYPE OF ABATEMENT:

Removal Enclosure Encapsulation

**QUANTITY AND TYPE OF ASBESTOS-CONTAINING
MATERIAL (ACM) TO BE ABATED:**

ABATEMENT TECHNIQUES:

Glove Bag Negative Pressure Containment
 Wet removal Tent Enclosures Other _____

REASON FOR ABATEMENT:

ASBESTOS CONTRACTOR:

CONTRACTOR'S DOEE ASBESTOS HANDLING NUMBER:

CONTRACTOR'S PROJECT SUPERVISOR:

AIR SAMPLING COMPANY:

ANALYTICAL LABORATORY:

ASBESTOS COORDINATOR:

Please contact EHS at safety@gwu.edu if there are any questions regarding this abatement.

DO NOT REMOVE



Appendix C: Carpet Installation/Replacement Sheet

This Fact Sheet has been developed to help assist you in deciding how to proceed with carpet replacement projects. Since asbestos-containing floor tile and/or associated floor tile mastic (glue) may be disturbed during a carpet replacement project, the following guidelines have been developed to prevent potential exposure to asbestos in compliance with applicable asbestos regulations.

If your project area has no floor tiles...

Any carpet style approved the building standard can be placed on the concrete flooring, as long as it meets safety standards, including approved fire ratings.

If your project area has no existing carpet, but has floor tile...

The Project Manager must work with EHS to develop a plan to move forward.

The use of a carpet system consists of a double stick woven sheet as the adhesive base which is laid over the existing flooring, with an *Advantage* carpet installed on top. Therefore, in the future, the *Advantage* carpet can be removed easily without disturbing the floor tile, eliminating the need for future asbestos abatement.

If the project area has existing carpet with floor tile beneath the carpet...

At the same time the carpet installation company is estimating carpet measurements, they will conduct “test pulls” of the carpet in several areas to assess the likelihood that floor tile will be disturbed during the actual carpet removal. One of the following scenarios will occur:

Scenario #1: The carpet pulls up very easily during the carpet test pulls and floor tiles are not disturbed.

This is typically the case with very old carpet where the carpet glue has lost much of its adhesion. Proceed with the replacement.

HOWEVER, if during the actual carpet removal, floor tile unexpectedly start to pull up in areas where test pulls could not be conducted, you must decide on one of the following courses of action:

- Option 1 - Lay the old carpet back down if possible.
- Option 2 – Abate the area.



Scenario #2 - The carpet does not pull up easily during the carpet test pulls. Carpet should not be ordered until a solution has been determined.

This typically occurs when the existing carpet is only a few years old and the carpet glue is still firmly bonded to the floor tiles.

- Option 1 - Leave the existing carpet in place.
- Option 2 – Abate the area.

For further information, Environmental Health and Safety at safety@gwu.edu.



Appendix D: Floor Tile Safety Fact Sheet

BACKGROUND: Asbestos was used in many types of building materials including vinyl floor tile and floor tile mastic. Asbestos in the floor tile served to increase resistance to wear and water damage and was well bound into the plastic matrix. New or recently installed floor tile should not contain asbestos but our older 12" x 12" floor tile and 9" x 9" floor tile, circa 1980s or earlier, likely contains asbestos. Also, our older black mastic typically contains asbestos unlike the newer yellow or clear mastic. Even though not all of the floor tile and mastic at the University may actually contain asbestos, the University must assume all floor tile and mastic contains asbestos, unless laboratory analysis proves otherwise. However, in order to expedite floor tile projects and save on expensive laboratory costs, we don't routinely sample floor tile and mastic. Known or presumed asbestos-containing floor tile and mastic must be cared for in a special manner as outlined below:

Removing Loose or Damaged Floor Tile: According to DC Department of Labor (DC-DOL), only EPA/DC-DOL trained and certified asbestos workers can handle known or presumed asbestos-containing materials, including floor tile and mastic. If you need any floor tile removed (or re-glued), contact EHS.

Removing Carpet over Floor Tile: Follow the *Carpet Replacement Fact Sheet!* (APPENDIX C)

Caring for Floor Tile:

- Do not sand, cut, drill, or saw flooring.
- Only burnish or dry buff on flooring that has a finish.
- When stripping finishes on flooring:
 - Use low abrasion pads.
 - Use equipment that operates less than 300 revolutions per minute (rpm).
 - Use wet methods.

