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EH&S Program: Environmental Services	Next Review: 9/5/22
Scope: University / Hospital Wide	Original: 1997

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Policy:

Presumed, suspect and identified asbestos-containing materials are managed in a safe manner by having only NYSDOL and EPA certified personnel conduct asbestos activities, including the inspection, sampling, design, planning, supervision, management, handling and abatement of these materials.

Definitions:

Asbestos: Any naturally occurring hydrated mineral silicate separable into commercially usable fibers, including chrysotile (serpentine), amosite (cumingtonite-grunerite), crocidolite (riebeckite), tremolite, anthophyllite and actinolite.

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.

Asbestos-Containing Materials (ACM): Any material containing greater than one percent (1%) of 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: Usually found bonded into other materials (flooring materials, caulking, mastics, and roofing) and do not normally release airborne fibers unless subjected to cutting, sanding, or grinding.

Presumed Asbestos-Containing Materials (PACM): All Thermal System Insulations 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. A listing of typical suspect miscellaneous ACM can be found in Subpart 56-5. All suspect miscellaneous ACM must be assumed to be ACM, unless proven otherwise by appropriate bulk sampling and laboratory analyses.

Procedures:

A. Responsibilities

1. Departments and Employees

- a. Staff assumes all building materials contain asbestos unless laboratory testing or a previous survey proves otherwise, and does 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.
- b. Staff reports damaged and/or deteriorated ACM, suspect ACM or PACM to their Supervisor. Supervisor or designee reports to the Department of Environmental Health and Safety (EH&S) at 2-6410. To recognize this damage or deterioration, by material type:
 - 1) Floor tiles - look for cracked, broken or chipped tiles
 - 2) Thermal insulation - look for debris near the insulation and exposed areas
 - 3) Fireproofing - look for debris and delamination
 - 4) Other PACM - look for debris near the material; stains, cracks, scrapes, marks; or missing or dislodged material

2. Custodial - takes proper precautions when working with known or suspect asbestos-containing flooring material including the following safety measures:

- a. Never sand asbestos-containing flooring material.
- b. Stripping of finishes is conducted using low abrasion pads at speeds lower than 300 revolutions per minute (rpm) and wet methods.
- c. 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.
- d. 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.

- e. Avoid scraping floor tiles when moving furniture.

3. Environmental Health and Safety

- a. Coordinates asbestos abatement projects. On occasion, asbestos projects are coordinated by the State University Construction Fund (SUCF) or the Dormitory Authority of the State of New York (DASNY).
- b. Maintains New York State Department of Labor (NYSDOL) and Environmental Protection Agency (EPA) certified staff, within EH&S, to conduct asbestos management services.
- c. Conducts Operation & Maintenance (O&M) asbestos abatement projects with in-house certified asbestos staff. O&M activities are only associated with the performance of emergency or routine maintenance and are not intended solely as asbestos abatement.
- d. Collects bulk samples of PACM and suspect materials with in-house certified asbestos inspectors to determine asbestos content, as needed.
- e. Coordinates asbestos awareness training for maintenance, Power Plant and custodial staff. Because none of these staff are anticipated to be exposed to airborne concentrations of asbestos at or above the PEL and/or excursion limit, annual training is not required.
- f. Issues notifications and posts Asbestos Abatement Notices at entrances to and near the abatement site. The notification form is provided in Appendix B.
- g. Manages remediation, surveys, laboratory analysis, and air sampling contracts. EH&S provides project cost estimates to the requesting department for approval and acceptance. The requesting department authorizes EH&S to initiate the project by submitting an account number for fund transfer upon completion of the work.
- h. An asbestos consultant, hired by EH&S, conducts asbestos testing services, as needed. These services include performing pre-construction inspections, daily Asbestos Project Monitor oversight of the hired asbestos abatement contractor, and air and bulk sampling for the project. The asbestos consultant must be approved by the NYSDOH ELAP program and may not be subcontracted.
- i. Required documentation, including notifications, project logs, air and bulk sampling results and waste manifests must be provided to EH&S for regulatory purposes.

4. Maintenance and Construction Departments

- a. Prior to maintenance work or renovations where ACM, suspect ACM or PACM may be disturbed, the project manager or designee contacts EH&S to coordinate an asbestos survey. Employees must not be assigned to work in these areas until the survey results have been completed and the area has been cleared by EH&S.
- b. Coordinate the replacement of floor tiles, insulation, and other materials once any ACM has been abated.

B. Locations of ACM, Suspect ACM and PACM

1. NYS Industrial Code Rule 56 requires an asbestos survey to assess whether ACM, suspect miscellaneous and/or PACM will be impacted prior to any renovation, demolition or remodeling activities.
2. Specific locations of ACM on campus are provided in Appendix A. All other materials shall be assumed to contain asbestos unless proven otherwise through laboratory analysis.
3. 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.
4. 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.
5. Laboratories may contain asbestos-containing bench tops, transite panels in fume hoods, floor tile and associated mastic, and pipe fitting insulation.

C. Procedures

- 1. Reporting Damaged suspect, assumed, or known ACM** - Supervisors or designee reports 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 EH&S at 2-6410 to coordinate the survey to identify ACM, PACM and suspect asbestos materials.
- 3. Asbestos Abatement**
 - a. Department representatives, Building Managers or Facilities Project Managers must promptly notify EH&S with all information regarding the

planning of an asbestos abatement project to allow for notification, by EH&S.

- b. The Department representative(s) or Facilities Project Manager must arrange and perform a job site walk-through with abatement contractors.
- c. The Project Manager, SUCF or DASNY must provide EH&S with all notification information regarding the planned asbestos abatement project at least 10 working days prior to the start of the abatement. Information must include:
 - 1. Exact location
 - 2. Start and completion dates of scheduled work
 - 3. Type of abatement
 - 4. Quantity of type of asbestos-containing material (ACM) to be abated
 - 5. Abatement technique(s)
 - 6. Reason for abatement
 - 7. Asbestos contractor (full name and address, phone, fax)
 - 8. Contractor's NYSDOL Asbestos Handlers License number
 - 9. Contractor's Project Supervisor (full name and address, phone, fax)
 - 10. Air Sampling Company (full name and address, phone, fax)
 - 11. Analytical Laboratory (full name and address, phone, fax)

EH&S posts Asbestos Abatement Notices in and around the abatement location ten (10) days in advance of the start of the abatement.

- d. The Asbestos Project Monitor company is on-site throughout the duration of the abatement project providing daily updates to EH&S.

5. Post Abatement Reports - The abatement contractor, DASNY or SUCF provide EH&S with asbestos-related documentation which may include:

- a. Summary of all proposals of work, work performed, asbestos and air sampling and results, transactions, etc. prior to, during, and after abatement completion.
- b. Copies of all related certifications and/or licenses for all employees, companies and contractors handling ACM in any manner
- c. Asbestos inspection methodology
- d. Bulk sampling and analysis methodology
- e. Copies of all regulatory notifications and variances to regulatory agencies including the NYSDOL, EPA, and DEC
- f. Copies of all completed and signed Waste Manifests
- g. Copies of all bulk sampling and air monitoring analysis laboratory reports
- h. Copy of all daily work and inspection log(s)

- 6. Carpet Installation/Replacement Projects** - The Carpet Installation/Replacement and Floor Tile Safety Fact Sheets, located in Appendices C & D, contain detailed information on proper carpet replacement procedures. Following these guidelines prevents the disturbance of asbestos-containing flooring and/or associated mastic.

D. Asbestos Awareness Training

1. EH&S coordinates asbestos awareness training and enters the training information into the Peoplesoft training database.
2. Supervisors are responsible for ensuring that maintenance, construction and custodial staff receive initial asbestos awareness training.

Forms:

Campus Notification (Appendix B)

Policy Cross Reference:

NA

Relevant Standards/Codes/Rules/Regulations/Statutes:

NYSDOL Industrial Code Rule 56, 12 NYCRR Part 56

29 CFR 1910.1001 Asbestos Standards *for General Industry*

29 CFR 1926.1101 Asbestos *Standards for Construction Industry*

Asbestos Hazard Emergency Response Act (AHERA) (Toxic Substances Control Act (TSCA) Title II)

Asbestos School Hazard Abatement Reauthorization Act (ASHARA)

Asbestos Worker Protection Rule EPA 40 CFR Part 763, Subpart E

Asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP) Regulation EPA 40 CFR Part 61, Subpart M

Asbestos-Containing Materials in Schools Rule EPA 40 CFR Part 763, Subpart E

References and Resources:

Asbestos-Containing Materials at Stony Brook University (Appendix A)

Carpet Installation/Replacement Fact Sheet (Appendix C)

Floor Tile Safety Fact Sheet (Appendix D)

APPENDIX A - ASBESTOS-CONTAINING MATERIALS AT STONY BROOK 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 our University. Do not disturb any of these materials (i.e., do not drill, cut, sand, repair or remove these materials). Contact EH&S at 2-6410 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 EH&S.

Confirmed Asbestos-containing Materials at University	Potential Locations	Some Known Locations
SURFACING MATERIALS – Material that is sprayed-on, trowled-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	<ul style="list-style-type: none"> • Earth & Space Sciences (ESS) • Psychology A– 1st & 2nd Fl. Lobbies • Dana Hall – MER/Generator Rms. • Roosevelt Cafeteria • Kelly Cafeteria (1st Floor) • Tabler Cafeteria – MERs/Cooling Tower • Old Gymnasium
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, including UH (except LISVH and buildings constructed after ~1980)	<ul style="list-style-type: none"> • Mechanical Equipment Rooms (MER), Heating & Cooling Plants, Tunnels, Cafeterias • Basement corridors • Removed in Dormitory MERs
Fitting, Elbow, Joint and Valve Insulation	All University buildings, including UH (except LISVH and buildings constructed after ~1980)	<ul style="list-style-type: none"> • MERs, Heating & Cooling Plants, Tunnels • Classrooms, Laboratories, Cafeterias, Public Areas (above ceilings, behind walls or visible) • Dormitory buildings (behind walls, above ceilings, pipe

		chases, crawl spaces, and communal bathrooms)	
Aircell Pipe Insulation (looks like corrugated cardboard)	Some University buildings	<ul style="list-style-type: none"> • Old Chemistry • Old Gymnasium • Old Eng. • Harriman 	<ul style="list-style-type: none"> • Melville Library • Light Eng. • Dutchess
White Block Pipe Insulation	Some University buildings	<ul style="list-style-type: none"> • Power Plants, MERs, Tunnels • Old Chemistry • Old Gymnasium • ECC • Physics • Van de Graaff 	<ul style="list-style-type: none"> • Melville Library • Light Eng. • Heavy Eng. • Javits • Infirmary • Psych A
Transite Air Handling Duct	ESS, Lecture Hall 001	<ul style="list-style-type: none"> • ESS, AC-3 	
Underground Piping and Underground Pipe Insulation	University grounds, outdoors	<ul style="list-style-type: none"> • Chill Water line (transite) • High Pressure Steam line insulation • High Temp Hot Water line insulation 	
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, including UH (except LISVH and buildings constructed after ~1980)	<ul style="list-style-type: none"> • Classrooms, Laboratories, Offices, Public Areas, Cafeterias in all university buildings • Under carpet in dormitory bedrooms 	
Pegboard-like Transite Ceiling Panels	Some University buildings	<ul style="list-style-type: none"> • Old Eng Lecture Halls 143 & 145 	
Fire Door Insulation	All University buildings, including UH (except LISVH and buildings constructed after ~1980)	<ul style="list-style-type: none"> • Computer Science • Asbestos-containing fire doors removed in dormitory buildings 	
Vibration Isolator Cloth on Ductwork (looks like thick canvas)	All University buildings, including UH (except LISVH and buildings constructed after ~1980)	<ul style="list-style-type: none"> • Heating and Cooling Plants • MERs 	
Laboratory Bench Tops, Sinks, and Shelves	Some University buildings	<ul style="list-style-type: none"> • Laboratories 	
Interior Transite Panels within Fume Hoods	Some University buildings	<ul style="list-style-type: none"> • Laboratories 	

Transite Fume Hood Round Exhaust Ducts	Some University buildings	<ul style="list-style-type: none"> Life Sciences, service shaft ways
Cable Arc Proofing (13.8 kV cables)	Medium voltage electrical distribution system (manholes/ vaults)	<ul style="list-style-type: none"> Feeder Cables #2-5
Window and Door Caulking	All University buildings, including UH, and some dormitory buildings (except LISVH and buildings constructed after ~1980)	
Roofing Materials and Flashing	Some University buildings – some roofs have been replaced	
Transite Louvers on Cooling Towers	Cooling Towers	<ul style="list-style-type: none"> East Campus Heating and Cooling Plant
Ceiling Tile	All University buildings, including UH	Previous campus survey and bulk samples collected by EH&S, to date, have been negative for asbestos content.
Plaster	”	Bulk samples collected by EH&S, to date, have been negative for asbestos content, except in Kelly Café (1 st Fl.)
Sheetrock and Sheetrock Joint Compound	”	
Mudded seam on Duct Insulation	”	
Older mastics (glues), typically brown or black	”	
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 our University. If you are aware of any incorrect information on this Fact Sheet or additional information, please contact EH&S at 2-6410.

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APPENDIX B - ASBESTOS ABATEMENT NOTICE

LOCATION:

START DATE:

COMPLETION DATE:

TYPE OF ABATEMENT:

Removal Enclosure Encapsulation

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

ABATEMENT TECHNIQUES:

Glove Bag Negative Pressure Containment
 Wet removal Tent Enclosures

REASON FOR ABATEMENT:

ASBESTOS CONTRACTOR:

CONTRACTOR'S NYSDOL ASBESTOS HANDLING NUMBER:

CONTRACTOR'S PROJECT SUPERVISOR: AIR SAMPLING COMPANY:

ANALYTICAL LABORATORY: CAMPUS ASBESTOS COORDINATOR

Please contact the Asbestos Coordinator if there are any questions regarding this abatement.

DO NOT REMOVE

APPENDIX C - CARPET INSTALLATION/REPLACEMENT FACT 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 and type available on the State contract can be placed on the concrete flooring, as long as it meets safety standards, including approved fire ratings (Contact Procurement or EH&S for fire rating information).

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

The carpet installed must utilize **Shaw's Advantage system** or comparable system using recommended carpet or carpet tiles options. See below for more information on this system.

The Shaw's Advantage 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.

A representative from the Procurement department responsible for carpet purchases will be able to instruct which Advantage carpets are acceptable for use.

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. However, based on the information below, your department may or may not choose to purchase carpet and proceed with the replacement. If your department decides to order carpet, the carpet installed must be from the Advantage system using their carpet or carpet tile options. (See Information on Advantage System.)

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 (the carpet may have been cut into strips during the removal) and return the purchased carpet. Restocking fees or the entire cost of the carpet may be incurred by your department.
- Option 2 - Pay the asbestos abatement costs to have the floor tile and mastic removed completely. The removal of 200 to 700 square feet (average sized office) of floor tile/mastic can cost your department thousands of dollars plus an additional cost for required air sampling during the removal project.

Note:

1. A significant portion of the abatement cost reflects costs associated with mobilization, notification and construction of decontamination facilities. Coordination of a project with other adjoining areas should be considered

2. Some of the existing carpet may have to be cut back to allow for this overlay. If this cannot be accomplished, this option cannot be considered.

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. The requesting department options are:

- Option 1 - Leave the existing carpet in place and do not order new carpet.
- Option 2 - Pay the asbestos abatement costs to have the floor tile and mastic removed completely. The removal of 200 to 700 square feet (average sized office) of floor tile/mastic can cost thousands of dollars plus an additional cost for required air sampling during the removal project.

For further information, contact Procurement (2-6046/2-6044) or Environmental Health and Safety (2-6410).

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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 1980's 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 the New York State Department of Labor (NYSDOL), only EPA/NYSDOL 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 reglued), contact EH&S. Our in-house certified routinely removes minor amounts of floor tile. To have large quantities removed contact EH&S for a cost estimate to have a licensed contractor do the work.

1. **Missing Floor Tiles:** Contact EH&S so our in-house certified Asbestos Management staff can encapsulate (paint) the floor prior to re-tiling. Although this is not required for minor projects (less than 10 square feet) we do this anyway to seal in the mastic. EH&S is not responsible for the re-tiling.
2. **Removing Carpet over Floor Tile:** Follow the *Carpet Replacement Fact Sheet!*
 - Provide the *Carpet Replacement Fact Sheet* to your customers so they realize that asbestos-containing floor tile may pose a problem for their project.
 - Conduct a carpet "test pull" to determine the likelihood of the floor tile remaining intact or being disturbed during the actual carpet removal.
 - If the "test pull" is good and it appears that the carpet will come up easily without pulling up floor tiles, you may proceed with the carpet removal. If during the actual carpet removal project floor tiles are being pulled up with the carpet contact EH&S (for small areas, certified EH&S staff can pull up the remaining amount of carpet but for large areas an outside licensed contractor may have to be used or the carpet may have to be laid back down).
 - If the "test pull" is not good and floor tiles are likely to pull up with the carpet, the department requesting the carpet removal can either:
 - Keep the existing carpet
 - Pay for asbestos abatement costs to remove the carpet and floor tile/mastic
3. **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.