



UNIVERSITY OF
SOUTH CAROLINA

ASBESTOS MANAGEMENT PLAN

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University of South Carolina Asbestos Management Plan

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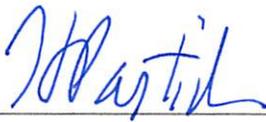
University of South Carolina Asbestos Management Plan

SIGNATURE PAGE

The University of South Carolina (University/USC) is committed to providing a safe and healthful work environment for its faculty, staff, students and visitors. Pursuant to this, the University will make every effort to manage asbestos containing materials in a manner that minimizes exposure to humans and the environment.

It is also the intent of the University to comply with all Federal and State regulations pertaining to the management and handling of asbestos containing materials.

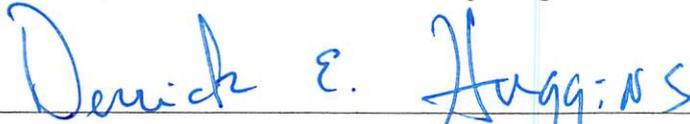
This document is not intended to be inclusive of all regulatory requirements or best management practices. It is intended to establish the University's comprehensive plan, as well as define procedures and processes with regard to asbestos management.



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1. BACKGROUND

1.1 General Information

The University of South Carolina recognizes that asbestos-containing materials (ACM), when not properly managed, may release asbestos fibers into the air and pose a health risk to University faculty, staff, students, contractors and visitors. Therefore, it is the policy of the University to comply with all Environmental Protection Agency (EPA), South Carolina Department of Health and Environmental Control (SCDHEC) and Occupational Safety and Health Administration (OSHA) regulations pertaining to the management, removal and disposal of ACM.

Asbestos is a generic term used to describe any of six naturally occurring fibrous minerals. Because of several desirable characteristics, asbestos was incorporated into a number of widely used products.

Common examples of ACM include but are not limited to: pipe and boiler insulation, sprayed on fireproofing, troweled on acoustical plaster, wallboard systems, floor tile and mastic, floor linoleum, transite shingles, roofing materials, wall and ceiling plaster, ceiling tiles, and gasket materials.

The potential for exposure to asbestos fibers exists only when the material that contains asbestos is disturbed or becomes damaged. When left intact and undisturbed, these materials do not pose a health risk.

1.2 Definitions

- Asbestos Containing Material (ACM) - any material containing more than one percent asbestos by weight.
- Asbestos Inspection - prior to beginning any renovation (of any size) and/or demolition operation at a USC owned or operated facility; an asbestos inspection must be performed. The purpose of the asbestos inspection is to identify the presence, location, quantity and condition of any ACM that will or may be disturbed or otherwise impacted during the course of the project.
- Asbestos Program Manager (APM) – Individual within USC Facilities Department responsible for managing the processes defined in this document.
- Auxiliary Department – any USC functional unit not within the USC Facilities Department.
- Demolition - wrecking or taking out any load-supporting structural member of a facility and any related handling operations.
- Negative Exposure Assessment (NEA) – A demonstration that employee exposure during an operation is expected to be consistently below the Permissible Exposure Limit (PEL). “NEA Tasks” are those that have been determined by USC EHS, via personal air sampling, not to pose a risk of exposure above the OSHA exposure threshold limits.
- Operations and Maintenance (O&M) – tasks performed for the purpose of maintaining or repairing equipment or other building systems. These tasks typically do not require the removal of ACM or PACM, but if so, may not exceed that which can be contained in one glove bag or one 6-mil polyethylene bag measuring no greater than 60 inches in length and width.
- Permissible Exposure Limit (PEL) – regulatory limit on the amount or concentration of a substance in the air. The OSHA PELs for asbestos are defined as 0.1 fibers per cubic centimeter (f/cc) as an 8-hour time weighted average (TWA) exposure, and 1.0 f/cc as a 30 minute excursion limit.

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- Presumed Asbestos Containing Material (PACM) - any building material that has historically contained greater than one percent asbestos but has not been sampled or analyzed to verify or negate the presence of asbestos.
- Project Manager – The individual who is assigned responsibility for the management of a renovation, demolition or maintenance project. The Project Manager may be an employee of Facilities, Housing, Athletics, or any other department of the University who is sponsoring and/or overseeing the construction or renovation. The Project Manager is responsible for ensuring that all requirements of this document are followed.
- Renovation - altering a facility or one or more facility components in any way, including the stripping or removal of regulated asbestos-containing materials (RACM) from a facility component. "Remodeling" is considered renovation.
- Site Inspection - are the process and procedures employed by the responsible authority, separate from the contractor's own supervision of the works. These inspections allow the University to maintain a safe and healthful work environment, and help better ensure compliance with environmental and safety regulatory requirements.

1.3 Health Hazards

Asbestos is recognized and regulated as a health hazard by OSHA and the EPA. Asbestos can break apart into very small fibers, which are not visible to the naked eye. Breathing asbestos fibers has been linked to a variety of diseases.

Asbestosis is a condition of the lung tissue which is caused by inhalation of asbestos fibers. High dose or long term exposure to asbestos fibers can lead to interstitial formation of fibrotic tissue, which may lead to difficulty breathing and an increased chance of malignancies. Asbestosis is generally the result of high intensity or long term exposure to asbestos fibers. The latency period for Asbestosis is 20-30 years.

Lung cancer is generally associated with high dose or long term exposure to asbestos fibers. The latency period for asbestos related lung cancer is 15-35 years.

Pleural mesothelioma is a rare form of cancer which affects the lungs' protective membrane, called the mesothelium. There is not a clear dose relationship between asbestos exposure and onset of this form of cancer, and the latency period from exposure to disease onset is 20-50 years. There is currently no known cure for mesothelioma.

1.4 General Policy/Purpose

Improper disturbance of asbestos containing materials may lead to asbestos exposure to University staff, faculty, students, contractors and visitors, and may cause serious illness. The University is committed to preventing exposure by following safe work practices for removal, disturbance, management and disposal of asbestos containing materials.

The University's Departments of Facilities and Environmental Health and Safety (EHS) have developed specific policies, procedures and processes to ensure that asbestos projects are managed throughout the University System in a manner that minimizes risk to human health and the environment.

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The University has a regulatory requirement to implement and follow an Asbestos Management Plan (AMP) that sets forth the procedures for the entire University system. All employees must follow the requirements outlined in the AMP for all projects of any size. This includes projects or tasks that disturb any existing building structure, or any other material which may contain asbestos. As defined by SCDHEC, even small projects which require removal, cutting, sanding, drilling or other disturbances of building materials which may contain asbestos are subject to this requirement.

This document will be routinely reviewed and revised as needed to maintain continuous improvement. The procedures and requirements herein are subject to audit by USC EHS.

1.5 Regulatory Authorities

Asbestos materials are regulated by the following agencies (with relevant regulation cited):

- OSHA - Asbestos for General Industry, 29 CFR 1910.1001
- OSHA - Asbestos Standard for Construction Industry, 29 CFR 1926.1101
- EPA - National Emissions Standard for Hazardous Air Pollutants, 40 CFR 61 Subpart M
- EPA - Asbestos Model Accreditation Plan, 40 CFR 763 Appendix C – Subpart E
- Hazardous Materials Regulations 49 CFR 171-185
- Asbestos Hazard Emergency Response Act (AHERA), 40 CFR 763 Subpart E
- SC DHEC Regulation 61-86.1, Standard of Performance for Asbestos Projects

1.6 Best Management Practices

USC EHS recommends guidelines for operations based on best management practices. Currently these include:

- 1.6.1 Abate all ACM impacted during the course of renovation or any other work activities.
- 1.6.2 Do not cover any ACM such as vinyl floor tile, mastic, rolled vinyl flooring products, pipe insulation, or any other material that has the potential to deteriorate while covered. Leaving these materials results in much higher costs of future removal and presents complications for future projects.
- 1.6.3 Do not use asbestos containing lab gloves, wire mesh screens, test-tube holders or other similar laboratory equipment. Contact the APM for disposal options.
- 1.6.4 Use non-ACM in construction whenever possible.
- 1.6.5 During renovation or new construction, ensure that newly installed materials are tested and demonstrated to contain no asbestos.

1.7 Leased Buildings

USC has a responsibility to follow the regulations in all owned and operated buildings. Furthermore, USC has responsibility for worker safety in buildings that are owned and operated by entities other than the University. All requirements set forth in this document apply to work performed by the University in any properties leased by the University.

1.8 Use of State Credit Cards for Contracted Work

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Departments that use a State Credit Card to hire outside contractors to perform work covered by this program will assume the role of Project Manager, and therefore are responsible for ensuring that all requirements are followed. This includes ensuring that an asbestos inspection report is generated (Section 3.2) and following all requirements for contractor management (Section 6).

2. GENERAL POLICIES

2.1 Auxiliary Departments and Regional Campuses

2.1.1 Renovations & Demolitions

2.1.1.1 For any renovation or demolition project within the University system, responsibility for asbestos management and compliance rests with the managing entity for the project. Auxiliary departments and regional campuses that elect to manage their own renovation/demolition project without involvement from USC Construction & Design will assume full responsibility for all aspects of asbestos management and compliance for the project.

2.1.1.2 The following requirements apply to any department or campus that elects to manage their own project:

2.1.1.2.1 Your campus or department must have at least one staff member who will assume responsibility for asbestos management and compliance for the project. This person is required to be a SCDHEC trained and licensed asbestos inspector (See Section 7).

2.1.1.2.2 Before beginning any renovation or demolition work, you must obtain an asbestos inspection report that is no more than 3 years old. This is a SCDHEC requirement and there are no exceptions. Note that SCDHEC has a very narrow definition of “renovation” – even small projects are regarded as renovations and are therefore subject to this requirement. An asbestos survey may be requested from USC HAZMAT by following the procedure in Section 3.2.6.2. Alternatively, you may hire an outside contractor to conduct the required asbestos inspection. If so, you must forward the completed inspection report to hazmat@sc.edu for review before work may begin.

2.1.1.2.3 If you hire an outside contractor for a renovation or demolition, before work begins, you must complete a Permit to Work (F3) and ensure that it is signed by a contractor representative. The completed, signed Permit to Work form must also be submitted to USC HAZMAT by emailing hazmat@sc.edu. A copy of this permit and a copy of the asbestos inspection report must remain on the jobsite at all times.

2.1.1.2.4 If you decide to hire a contractor for the purposes of asbestos abatement, you must first notify USC HAZMAT by emailing hazmat@sc.edu.

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2.1.1.2.5 If the project requires the disturbance of ACM or PACM, you must notify building occupants and any other contractors on the job. No method of notification is specified, but must be documented.

2.1.2 Operation and Maintenance Tasks

2.1.2.1 For work that is not considered a renovation or demolition (i.e. operations and maintenance tasks), you are still responsible for ensuring that no ACM is disturbed while performing the work. If building materials that can possibly contain asbestos, such as wallboard systems, pipe insulation, ceiling tiles, mastics and fireproofing will be disturbed during the task, it is your responsibility to verify that these materials are non-ACM before work.

2.1.2.2 You may elect to have members of your maintenance staff trained to perform certain routine tasks that involve the disturbance of ACM/PACM wallboard systems, where a current Negative Exposure Assessment (NEA) is in place. Examples include drilling and cutting into ACM/PACM wallboard and any task that requires the insertion or removal of nails or screws into or from wallboard systems (such as installing shelving). Specific training and procedures apply. See Section 2.6 for more information.

2.2 General Work Practices for Preventing Exposure to Asbestos

The following general requirements must be followed for all work conducted within the University of South Carolina system:

2.2.1 Any tasks requiring the disturbance of ACM or PACM will only be conducted by properly trained and licensed personnel. See Training, Section 7.

2.2.2 All surfaces must be maintained as free as practical of ACM waste, debris, and accompanying dust.

2.2.3 Maintenance and custodial activities performed in areas containing ACM shall be carried out in a manner that does not disturb the material.

2.2.4 Surfaces contaminated with asbestos may not be cleaned using compressed air.

2.2.5 The use of high-speed abrasive disc saws to cut ACM or PACM is prohibited.

2.2.6 Waste, debris, and accompanying surface dust in areas containing accessible and/or visibly deteriorated ACM, shall not be dusted, swept or shoveled dry.

2.2.7 Where vacuuming methods are selected to clean asbestos dust/debris, HEPA filtered vacuuming equipment must be used.

2.2.8 Report damaged or deteriorating ACM/PACM, or debris that is suspected to be ACM/PACM, to supervisor or directly to USC HAZMAT. If visible dust or debris from building materials is discovered in areas that contain ACM, cleanup or repair may only be conducted by trained and authorized personnel.

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2.2.9 The disturbance of ACM or PACM wallboard systems is prohibited unless NEA procedures are in use by trained and authorized personnel. This includes drilling, insertion or removal of screws, insertion or removal of nails or cutting.

2.2.10 All vinyl and asphalt flooring should be treated as ACM unless evidence exists to prove otherwise. The following restrictions exist for the care of ACM flooring:

- No sanding is permitted.
- Stripping must be conducted using low abrasion pads at speeds lower than 300 rpm with wet methods.
- Burnishing or dry buffing may be performed only on flooring which has sufficient finish so the pad doesn't contact the flooring material.
- Broken ACM floor tiles should only be removed by properly trained personnel.

2.2.11 Ceiling tiles should not be moved or replaced until it is confirmed that they are non-ACM. In buildings where spray-applied surfacing materials (e.g., fireproofing, ceiling texture) are known to exist above drop ceilings, tiles must be cleaned of visible debris before they are disturbed. Only trained personnel can replace, clean, or otherwise disturb ACM ceiling tiles or tiles that may be contaminated by ACM surfacing material from above.

2.3 Medical Surveillance Program

USC EHS maintains a medical surveillance program for all employees who are engaged in Class I, II or III work for a combined total of more than 30 days per year or are exposed at or above the permissible exposure limit. This medical surveillance consists of a review of medical and work history, a physical exam directed to the pulmonary and gastrointestinal systems, a chest roentgenogram interpreted by a NIOSH certified B Reader, and pulmonary function tests. This exam is offered annually at no charge to affected employees.

2.4 Respiratory Protection

All University employees must be provided with the proper protective clothing and respirators when assigned to do Class I – Class III work (exception: NEA tasks). The University maintains a respiratory protection program for its employees in accordance with OSHA 29 CFR 1910.134. For questions regarding the respiratory protection program contact USC EHS.

2.5 In-House OSHA Class III (O&M) Work – General Requirements

2.5.1 All workers engaged in Class III work must receive at least 16 hours of training, as per 29 CFR 1926.1101. An annual 8 hour refresher is also required.

2.5.2 Respirators (minimum of ½ face air purifying respirator with HEPA cartridges) are required for all employees engaged in Class III work. Employees wearing respirators must be enrolled in the University's Respiratory Protection Program. **Exception:** respirators are not required when disturbing ACM/PACM wallboard systems using NEA procedures (see Section 2.6)

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- 2.5.3 When a job requires respirator use, Columbia campus Facilities employees must request a respirator by contacting the USC HAZMAT Administrative Assistant by either calling 777-6175, or by sending an email to hazmat@sc.edu.
- 2.5.4 A Class III Work Checklist (F4) must be properly completed for each job. Upon completion of the job, submit the completed checklist to the USC HAZMAT Administrative Assistant via email at hazmat@sc.edu. A hard copy may also be dropped off at the USC HAZMAT offices.
- 2.5.5 All waste generated from Class III work must be disposed of properly. Currently, there are three options:
- OPTION #1: The generator of ACM waste can call the Asbestos Abatement Manager at USC Columbia for pick up. There will be a charge for their services. Contact USC HAZMAT at hazmat@sc.edu for a cost estimate.
 - OPTION #2: All generators of waste, including regional campuses, may transport waste to USC HAZMAT. All ACM waste bags must be properly labeled, free of visible residue, splits, punctures and tears. Waste bags must be placed in a rigid, impermeable drum for transportation. For waste transported from regional campuses or other sites outside of Columbia, contact USC EHS for approval. A variance from SCDHEC may be required prior to transportation.
 - OPTION #3: Regional campuses may maintain their own ACM waste storage by obtaining a storage license from SCDHEC. Contact USC HAZMAT or EHS for assistance.

2.6 Negative Exposure Assessment Tasks

- 2.6.1 Certain work tasks that require disturbance of ACM/PACM wallboard systems may be performed without the use of respirators or enclosures provided a current Negative Exposure Assessment (NEA) is in place. Auxiliary departments and regional campuses may, provided their employees have approval from USC EHS and received the required OSHA and task-specific training, perform these tasks.
- 2.6.2 All NEA tasks must be approved by USC HAZMAT before work may begin. Approval requests must be submitted to USC HAZMAT using the following procedure:
- 2.6.2.1 Email a NEA Work Request Form (F5) to USC HAZMAT hazmat@sc.edu. With the exception of emergency work, notifications must be submitted a minimum of 3 days prior to the beginning of the project.
- 2.6.2.2 USC HAZMAT will review the request, verify the worker's qualification, indicate approval or denial, and return the request form and response to the department representative, copying USC EHS.
- 2.6.2.3 The department representative must notify all building occupants of the dates and times of work. This may be accomplished via email.

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- 2.6.2.4 Department employees performing the NEA work must complete and sign a Class III Work checklist (F4) and return it to the department representative. When the job is complete, the department representative will return the signed Class III Work checklist (F4) to USC HAZMAT.
- 2.6.3 All NEA work must be performed in accordance with procedures in the appendices of this document (see PROCEDURES section).
- 2.6.4 NEA tasks are subject to audit/inspection by USC HAZMAT or USC EHS.

3. PROJECT PLANNING

3.1 Role of USC HAZMAT in Project Planning

- 3.1.1 USC HAZMAT, located in the Columbia campus Facilities Department, is the University's central point of contact for managing asbestos hazards during renovation and demolition projects at the University.
- 3.1.2 USC HAZMAT should be included from the onset of the project design and specifications of all projects to better ensure that any asbestos-related costs associated with the project are captured. USC HAZMAT must be notified of any changes/revisions to the design and specifications of a project.
- 3.1.3 USC HAZMAT must be notified of, and given a reasonable opportunity to attend, any planning meetings that occur prior to work. These include, but are not limited to, feasibility, design, pre-bid and pre-construction meetings.
- 3.1.4 Once the project begins, USC HAZMAT must also be notified of, and given a reasonable opportunity to attend any project progress meetings and/or tailgate meetings. This will help ensure a mutual understanding between any contractors, project management and USC HAZMAT regarding project status and the effectiveness of asbestos management efforts.

3.2 Asbestos Inspections

- 3.2.1 Per SCDHEC R. 61-86.1, Section VI, A.1., prior to beginning any renovation (of any size) and/or demolition operation at a USC owned or operated facility; an asbestos inspection must be performed. The purpose of the asbestos inspection is to identify the presence, location, quantity and condition of any ACM that will or may be disturbed or otherwise impacted during the course of the project.
- 3.2.2 Asbestos inspections also must be performed for all operations and maintenance work as well as other activities that disturb building materials (such as drilling, cutting, sanding, inserting and/or removing screws/nails).
- 3.2.3 All asbestos inspections must be performed in accordance with Section VI of SCDHEC Regulation 61-86.1.

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- 3.2.4 Any project or activity that begins without a compliant asbestos inspection will be subject to a shut down until an inspection can be performed.
- 3.2.5 The inspector will conduct the asbestos inspection based on the scope of work provided by the requestor.
- 3.2.6 Asbestos inspections may be requested from USC HAZMAT via the following procedures:
- 3.2.6.1 Design and Construction Managers
- 3.2.6.1.1 Assign a hazmat inspection work order to USC HAZMAT in FAMIS. The requestor must supply a detailed description of the proposed work (including the scope of the project, specific location of the work and materials to be disturbed) and anticipated project start date. Please provide project drawings if available.
- 3.2.6.1.2 After receiving a work order, USC HAZMAT will contact the USC Project Manager to work out the details of scheduling and/or planning the inspection. Additional information as well as an on-site project walk-through may be requested at that time.
- 3.2.6.2 Facilities Maintenance, Auxiliary Units and Regional Campuses
- 3.2.6.2.1 Call the Facilities Call Center at (803) 777-9675 or send an e-mail to fmcnotify@fmc.sc.edu. Submit a completed Request for Asbestos Inspection (F1) to FMC Notify. To ensure an accurate inspection report, you must provide a detailed description of the proposed work, including the scope of the project, specific location of the work and materials expected to be disturbed during the work. You must also provide your contact information, department fund code (account number) and the anticipated project start date. Please provide project drawings if available.
- 3.2.6.2.2 The Call Center will normally generate a service request (SR) assigned to USC HAZMAT in FAMIS. Depending on the scope of the request, the call center may submit the request to the Facilities Request Review Committee for review. This review will result in the Call Center generating a SR assigned to USC HAZMAT or creating a project for Facilities Design and Construction.
- 3.2.6.2.3 After receiving a service request, USC HAZMAT will contact the requestor to work out the details of scheduling and/or planning the inspection. Additional information as well as an on-site project walk-through may be requested at that time.
- 3.2.7 Alternatively, a contractor may be hired to conduct the asbestos inspection. If a contractor conducts the inspection, the inspection report and supporting data must be forwarded to USC HAZMAT for review to ensure that the report is complete and complies with SCDHEC requirements prior to work beginning.

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- 3.2.8 The asbestos inspection must cover all suspect materials that are expected to be disturbed as part of the scope of work at any given time. A change in the scope of work must be reported to USC HAZMAT as soon as possible so that the inspection report can be updated. Materials not included in the original inspection report may not be disturbed until the report is updated by USC HAZMAT.
- 3.2.9 Asbestos inspections also may be conducted for entire buildings or building systems (such as walls) in anticipation of future renovations or to determine the presence or absence of ACM for routine maintenance work.
- 3.2.10 Asbestos Inspection Planning

As USC HAZMAT provides support and services to a wide number of customers throughout the university system, it is critical that any work needed from the team is requested early enough to meet your project schedule while providing high quality service to all customers. While the work load and schedule of USC HAZMAT fluctuates throughout the year, the following guidelines can be used when requesting asbestos inspections for project planning purposes. *For work on regional campuses, these time frames may be slightly longer to accommodate travel requirements.* When the work load of USC HAZMAT does not allow for a timely response, an outside inspection contractor may be utilized (see 3.2.7).

| Project size | Typical time frame for USC HAZMAT team to be on-site and collect samples |
|---|---|
| Small projects (e.g., operations and maintenance work, audiovisual installations, carpet replacements, removing items from or hanging items on walls) | few days to one week |
| Mid-size projects (e.g., office/classroom renovations, suite renovations) | one to three weeks |
| Large capital project (e.g., building renovations or demolitions) | one month or longer |

After appropriate samples are collected, USC HAZMAT must prepare the samples to be sent to the laboratory for analysis. Once the laboratory results are received, staff must interpret the results and prepare the asbestos inspection report. This part of the process normally takes up to one week. In rare instances, additional time may be required.

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The inspector will prepare a report of the inspection results and attach them to the survey request in FAMIS. The lab results and other supporting documents will also be electronically attached to the survey request in FAMIS.

The requestor will receive an e-mail with the survey results attached.

3.2.11 Asbestos Inspection Process

3.2.11.1 Prior to collecting samples, USC HAZMAT will review historical data to determine if it covers the project scope or if additional sampling is required. In conducting this review, staff will determine if the data is current (must be less than 3 years old), covers all of the building materials that will be disturbed as part of the project and comes from the appropriate locations. In addition, staff will determine if the appropriate number of samples have been taken to meet regulatory requirements.

3.2.11.2 Destructive asbestos inspections are recommended during the feasibility study of all large proposed capital projects. This strategy should minimize the potential for significant change orders and delays as well as unexpected cost increases for all projects. If destructive asbestos sampling does not occur, projects may experience delays during construction. Destructive asbestos inspections do not guarantee that all suspect materials will be identified and sampled initially; some materials may not be found until the work begins.

3.3 Project Design

Certain asbestos abatement activities warrant the development of a comprehensive project design. A project design document will define the expectations of the university, the requirements of the work, the scope of the project, and can ultimately be used as part of the bid process. Many projects are simple enough that no project design is required and a “scope of work” may be all that is needed. The determination to prepare a formal specification or scope of work will be made on a case by case basis by USC HAZMAT.

A comprehensive Asbestos Abatement Design is required for all asbestos projects involving the removal of more than 3,000 square feet, 1,500 linear feet, or 656 cubic feet of friable ACM. If an Asbestos Abatement Design is required, a licensed Project Designer must be used to create the design. The Project Designer must provide the Asbestos Abatement Design to the USC Project Manager for review. The USC Project Manager should consult with USC HAZMAT to ensure that all regulatory requirements are being met.

For asbestos jobs that do not require a Project Design, a thorough Scope of Work is needed to clearly define the job and identify special requirements, such as working after hours. For complicated jobs, such as those involving spray applied fireproofing, it may be desirable to hire a Project Designer to create a design even if it is not required based on project size. This will be determined by USC HAZMAT on a case by case basis.

4. IN-HOUSE ASBESTOS ABATEMENT

4.1 USC HAZMAT maintains an in-house asbestos abatement team to serve the University System. Asbestos abatement services can be requested via the following procedures:

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- 4.1.1 Call the Facilities Call Center at (803) 777-9675 or send an email to fmcnotify@fmc.sc.edu. The requestor must submit a completed Request for Asbestos Abatement (F6) and supply a detailed description of the proposed work, contact information, department fund code (account number) and the anticipated project start date to FMC NOTIFY.
- 4.1.2 The Call Center will normally generate a Service Request (SR) assigned to USC HAZMAT in FAMIS. Depending on the scope of the request, the Call Center may submit the request to the Facilities Request Review Committee for review. This review will result in the Call Center generating an SR assigned to USC HAZMAT or creating a project for Facilities Design and Construction.
- 4.1.3 After receiving a service request, USC HAZMAT will contact the customer to work out the details of scheduling and/or planning the abatement.
- 4.2 FAMIS UPDATES – The Abatement Operations Manager will be responsible for updating the work order in the capital project workbench to accurately reflect the abatement cost, and will provide quotes to Project Managers upon request. The frequency of updates to the work order will depend on the scope of work, the length of the job, and amount of the proposed abatement.
- 4.3 As USC HAZMAT provides support and services to a wide number of customers throughout the University system, it is critical that any work needed from the team is requested early enough to meet your project schedule while providing high quality service to all customers. While the work load and schedule of USC HAZMAT fluctuates throughout the year, work requests are typically handled within a couple of weeks. For work on regional campuses, the response time may be slightly longer to accommodate travel requirements. When the work load of USC HAZMAT does not allow for a timely response, an outside abatement contractor may be utilized.
- 4.4 Building occupants must be notified through FMC Notify of any asbestos abatement or disturbance activities in their building. USC HAZMAT shall initiate FMC Notifications for in-house abatement/disturbance.

5. ASBESTOS WASTE DISPOSAL

- 5.1 USC HAZMAT has a Temporary Storage License to store asbestos waste. A Temporary Storage License is a license issued by SCDHEC that authorizes storage of asbestos waste from small and minor projects at a secure location deemed acceptable by SCDHEC.
- 5.2 USC HAZMAT disposes of the asbestos waste by notifying SCDHEC using the abatement project quarterly report.
- 5.3 For larger projects, USC HAZMAT may take the asbestos waste directly to a SCDHEC approved landfill.

6. CONTRACTED RENOVATIONS/DEMOLITIONS

- 6.1 Contractor Management – Asbestos Inspections/Permit to Work

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- 6.1.1 Prior to beginning any renovation and/or demolition work, it is the responsibility of the USC Project Manager to obtain a current asbestos inspection report that represents the proposed scope of work, in accordance with the procedure found in Section 3.2. This report may not be older than 3 years.
- 6.1.2 If, prior to work or during the course of the project, work must be done that is outside of the original scope of work, stop work immediately on the affected area and consult USC HAZMAT regarding all new materials that may be affected by the change. The scope of work must be revised and USC HAZMAT must be notified of the change. A revised asbestos inspection report will then be issued and must be included in the permit package before work in this area may resume.
- 6.1.3 The USC Project Manager must submit a Request for Permit to Work (F2) via electronic mail to hazmat@sc.edu no less than forty-eight (48) hours prior to the pre-construction meeting. Once the USC Permit to Work (F3) is completed by USC HAZMAT, the USC Project Manager must schedule a time to have the contractor meet with USC HAZMAT to review the USC Permit to Work, the asbestos inspection report, and to discuss any special instructions or prohibitions in effect during the project.
- 6.1.4 The Permit to Work must be signed prior to any work being performed by the general contractor or sub-contractor(s) or any contractor working for the University. Signed copies of the Permit to Work must be retained by USC HAZMAT and any contractor signees. The general contractor will be required to ensure that all subcontractors and workers on the job site are familiar with the contents of the asbestos inspection report and any special instructions/prohibitions defined on the Permit to Work. The signed Permit to Work and asbestos inspection report must remain onsite and posted in a conspicuous place for the duration of the project.
- 6.1.5 If the asbestos inspection report indicates that asbestos containing materials will be disturbed during work, the USC Project Manager may elect to have abatement or work requiring ACM disturbance performed by USC HAZMAT. Alternatively, a licensed asbestos abatement contractor may be hired. If a contractor is hired, USC HAZMAT must be notified prior to beginning abatement work.
- 6.1.6 USC HAZMAT and EHS are authorized and empowered to shut down any work on campus or in University occupied space that involves actual or potential asbestos exposure or other hazardous activities and does not have a completed work permit.
- 6.1.7 Building occupants must be notified through FMC Notify of any asbestos abatement or disturbance activities in their building. The Project Manager shall issue all FMC Notifications for contracted abatements. USC HAZMAT shall issue FMC Notifications for in-house abatement.
- 6.2 Site Inspections & Non-compliances
- 6.2.1 Environmental site inspections of construction projects allow the University to maintain a safe and healthful work environment, and help better ensure compliance with environmental and safety regulatory requirements. Site inspections will be performed by USC HAZMAT on a routine basis, with frequency depending on the scope of the project and hazards present. Site inspections are mandatory on all Capital Projects involving contractors if asbestos is detected during the asbestos

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inspection. Site inspections are also mandatory for any project where active abatement is occurring. Site inspections may also be performed upon request.

- 6.2.2 All projects are also subject to inspection by USC EHS.
- 6.2.3 As USC HAZMAT provides support and services to a wide number of customers throughout the University system, it is critical that any work needed from the team is requested in a timely manner to allow a high quality of service to all customers. In the event of an emergency, USC HAZMAT will respond to site inspection requests as promptly as possible.
- 6.2.4 Site inspections will be charged back to the projects through the Hazmat Permit Work Order. Budget estimates and quotes for this service will be provided at the request of the USC Project Manager.
- 6.2.5 Unauthorized/improper disturbances or releases of ACM/PACM during work must be reported to the USC Facilities Project Manager immediately. USC Facilities Project Manager must then report the incident immediately to USC HAZMAT, who will in turn notify USC EHS. All other USC Project Managers must report the incident immediately to USC EHS. The initial notifications may be via phone, but must be followed by a written notification.
- 6.2.6 Regulatory non-compliances discovered by a contractor that cannot be corrected immediately must be reported to USC via procedure in 6.2.5.
- 6.2.7 Consequences of non-compliances identified by USC HAZMAT/EHS:
- 6.2.7.1 Each non-compliance will be considered on a case by case basis. However, at a minimum, USC HAZMAT/EHS will take the following action to address any occurrence:
- 1st Offense - Notify USC Project Manager
 - 2nd Offense – Notify USC Departmental Management
 - 3rd Offense - Formal meeting with Contractor and University Personnel, including but not limited to USC HAZMAT, USC EHS, Departmental Management
- 6.2.8 Failure to follow the regulatory requirements or failure to work with the University to correct and prevent future non-compliances may result in removal of the contractor from the project worksite, and/or a negative performance evaluation from the University.
- 6.2.9 All infractions must be addressed immediately upon discovery. If it is not possible to correct the issue immediately, the contractor must submit a detailed, written Corrective Action Plan, which includes time frame for correction, to USC HAZMAT and USC EHS on the day of discovery.
- 6.2.10 Work Stoppages
- 6.2.10.1 Authorized University personnel may elect to stop project work on a case by case basis. EHS and USC HAZMAT are authorized and empowered to mandate work stoppages. The following conditions will be considered when making the decision:

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- When circumstances occur that are considered immediately dangerous to life or health.
- Evidence exists that there has been a release of asbestos outside of contained work areas.
- There has been an accident resulting in serious injury or death.

6.2.10.2 In the case of a work stoppage, the following notification process must be followed:

6.2.10.2.1 Person stopping the work must immediately contact USC HAZMAT who will ensure that the USC Project Manager is aware of the stoppage. USC HAZMAT shall immediately notify EHS.

6.2.10.2.2 The USC Project Manager will immediately notify their supervisor.

6.2.10.2.3 USC HAZMAT/EHS will notify the Departmental Safety Manager, who will ensure that their management structure is aware of the stoppage.

6.3 Air Samplers and/or Project Oversight

6.3.1 Environmental air sampling (background, daily, and clearance) will be conducted whenever required by SCDHEC.

6.3.2 Air samplers must be currently licensed by SCDHEC.

6.3.3 Air samplers may not be hired by the asbestos contractor on the job.

6.3.4 Air samplers must follow SCDHEC R. 61-86.1 Section VII (Standards for Air Samplers)

6.3.5 Depending on the size and complexity of the abatement project, the air sampler may also be hired to function in a project oversight role. In these cases, specific responsibilities of the air sampler will be included in the project specifications.

7. TRAINING

7.1 Asbestos training is mandatory for all University Faculty, Staff and contractor employees engaged in the following activities. Minimum training requirements are as follows.

| ACTIVITY | TRAINING REQUIREMENT | INITIAL LENGTH |
|--------------------------------------|--|----------------------------|
| | | REFRESHER LENGTH/FREQUENCY |
| Class I & II Operations (worker) | Asbestos worker training equivalent to EPA Model Accreditation Plan (MAP) asbestos worker training | 32 hrs. |
| | | 8 hr. annual refresher |
| Class I & II Operations (supervisor) | Asbestos supervisor training equivalent to EPA Model Accreditation Plan (MAP) asbestos worker training | 40 hrs. |
| | | 8 hr. annual refresher |
| Class III Operations (including NEA) | Equivalent to EPA AHERA requirements | 16 hrs. |
| | | 8 hr. annual refresher |

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| | | |
|--|---|------------------------|
| tasks) | | |
| Maintenance & Custodial Staff working in buildings that contain ACM/PACM | Asbestos Awareness Training (can be conducted as part of EHS annual safety training or separately) | 1-2 hrs. |
| | | annually |
| Asbestos Inspector | Asbestos inspector training equivalent to EPA Model Accreditation Plan (MAP) asbestos worker training | 24 hrs. |
| | | 8 hr. annual refresher |
| Air Sampler | NIOSH 582 | 40 hrs. |
| | | no refresher |
| Project Designer | Project Designer course equivalent to EPA AHERA requirements | 32 hrs. |
| | | 8 hr. annual refresher |