SECTION 21
ASBESTOS MANAGEMENT

TULANE UNIVERSITY
ENVIRONMENTAL HEALTH AND SAFETY
POLICIES AND PROCEDURES MANUAL
REVISION DATE: 9/1/03

Return to Table of Contents, EH&S Policies & Procedures Manual

SECTION CONTENTS

I. Asbestos Management (p.2)
   A. Policy
   B. Responsibilities

II. Asbestos Management Plans (p.4)
   A. Identification
   B. Sampling
   C. Assessment
   D. Operations & Maintenance

III. Notification Requirements for Planned and Emergency Projects (p.5)
   A. Planned Asbestos Projects
   B. Emergency Asbestos Projects

IV. Response Action: Managing an Asbestos Project (p.7)
   A. Materials Required
   B. Initial Steps
   C. Removal
   D. Work Site Decontamination
   E. Air Monitoring
   F. Waste Disposal

V. Medical Examinations (p.11)
   A. Medical Testing
   B. Criteria for Determining Requirement for Medical Exam
   C. Requirements for Examination by Licensed Physician
   D. Time Frame for Providing Test Results
   E. Exemption from Test Requirement
   F. Physician's Determination Re Respirator Usage
   G. Availability of Physician Information

VI. Training (p.12)
   A. LADEQ Approved Training
   B. Previously Trained Employees
   C. Awareness Training
   D. Training in the Use of Personal Protective Equipment and Respirator Protection
   E. Mandatory Attendance

VII. Recordkeeping (p.13)
   A. Exposure Measurement Records
   B. Medical Surveillance Records
   C. Training Records

ADDITIONAL READING

Contractor Safety Section 5
Facilities Services Section 24
Hazard Communication Section 12
Hazardous Materials Safety Section 29
Personal Protective Equipment Section 14
Respiratory Safety Section 15
I. Asbestos Management

A. Policy

B. Responsibilities
   1. Facilities Services
   2. Asbestos Coordinator
   3. University Project Coordinator
   4. OEHS/Asbestos Abatement Liaison
   5. Contractors
   6. Asbestos Abatement Workers

---

I. ASBESTOS MANAGEMENT

The hazardous properties of asbestos have led to strict regulation of asbestos and asbestos containing materials by the Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA). The EPA’s concerns are focused on the disease-causing potential of intermittent, low level exposures that can occur in some school buildings. OSHA’s concerns are focused on permissible workplace exposure levels for those in construction and general industries. EPA regulations governing asbestos are enforced in Louisiana by the Louisiana Department of Environmental Quality (LADEQ).

Of the two forms of asbestos used commercially—friable and non-friable—friable asbestos presents the greater risk as it may be crumbled, pulverized or reduced to a powder under normal hand pressure. When disturbed, as by vibration, air current, or other means, asbestos fibers become airborne and enhance the threat of exposure. Non-friable asbestos, which is bound in a matrix, does not represent a hazard unless it is damaged and rendered friable.

A. Policy

The asbestos policy set forth herein is University-wide and includes all forms of asbestos regardless of any other material used with it as a binder. Certain provisions of the policy may be waived and/or special conditions considered and applied in special cases involving “non-friable” asbestos containing materials (ACM) or ACM that contains less than one percent of asbestos.

The University’s policy is designed to: 1) comply with federal, state, and local governmental requirements, 2) shape governmental requirements into specific plans for “managing” ACM, and 3) give assurance to employees, students, and the surrounding community that the University is making every effort to promote a healthful environment free from asbestos exposure.

Due to the age of many University buildings, asbestos is present in one form or another throughout Tulane facilities but poses no threat as long as it is maintained in good condition and is not disturbed. Each structure on each campus has been, and continues to be, inspected for possible asbestos release. Findings of these inspections are documented in an Asbestos Management Plan for each building stating the location of the ACM, results of sampling, assessment of exposure potential, and an “operation and maintenance” plan for safely conducting routine activities in the ACM area.
Specifically, the asbestos policy dictates that: 1) asbestos shall not be used, in any form, in any University facility construction, renovation, remodeling, and/or installation; 2) no demolition, renovation, repair, or installation of new and/or old items in University buildings shall take place without first notifying the Asbestos Coordinator for each campus; 3) without exception, all plans for construction or renovation must be submitted to Facilities Services; 4) proper controls and precautions must be taken to reduce exposure, which shall be limited to the lowest levels possible or eliminated where feasible; 5) all efforts shall be made to identify, assess and abate asbestos exposure hazards in all University facilities; and 6) removal and disposal of ACM shall be performed in accordance with approved practices and procedures, and within the regulations of appropriate governmental agencies.

B. Responsibilities

1. **Facilities Services** shall be the only department authorized to hire contractors for construction, building, remodeling, maintenance, and service on behalf of the University whenever outside services for such work is required. (*See, Section 5, Contractor Safety,* of this manual regarding role of Facilities Services in hiring contractors.)

2. Each campus must designate an Asbestos Coordinator who shall be a Certified Asbestos Abatement Project Design Professional (CAAPDP) and must have attended and received a passing score from an LADEQ-recognized training course specifically designed for asbestos designers. The Asbestos Coordinator a) shall design the scope of and write specifications for the job in accordance with EPA, OSHA, LADEQ regulations, and University policies; b) shall convene a pre-project meeting to make certain that all personnel participating in the project know their responsibilities; and c) shall receive all job monitoring data for review.

3. Each campus must also designate a University Project Coordinator who shall work with OEHS and the Asbestos Coordinator, be responsible for assisting with project supervision and coordination, and ensure that proper procedures are followed when ACM is disturbed. The University Project Coordinator must have attended and received a passing score from an LADEQ recognized training course specifically designed for contractors/supervisors.

4. The Office of Environmental Health & Safety (OEHS), through its Asbestos Abatement Liaison, shall a) perform tasks assigned by the Asbestos Coordinator such as conducting pre-project bulk and air sampling, air monitoring during a project, and clearance air monitoring at the conclusion of a project; b) audit the contracted monitoring sites and review, with the Asbestos Coordinator, all results that must be provided to the contracted monitoring firm if, for any reason, an outside monitoring company is used (a final clearance decision shall be made by the Asbestos Coordinator in consultation with OEHS); c) receive all project design information, including scope of the job, as well as monitoring results associated with an asbestos abatement project; and d) maintain the Asbestos Abatement Plans for all Asbestos Hazardous Emergency Response Act (AHERA) covered facilities.

5. Contractors for monitoring and for abatement (cannot be one in the same) shall be responsible to the Asbestos Coordinator for the scope of the work. Contractors shall be responsible for all appropriate signage to ensure no one accidentally enters an abatement area. Contractors shall work closely with the Asbestos Abatement Liaison, University Project Coordinator, and Asbestos Coordinator to ensure that abatement activities are carried out in a safe manner. Both the monitoring and abatement contractors must have
attended and received a passing score from an LADEQ recognized course specifically designed for contractors/supervisors. *(see, Section 5, Contractor Safety of this manual.)*

6. **Asbestos Abatement Workers** are individuals trained in the proper handling and removal of ACM and shall be the only personnel allowed to work on an asbestos project. An Asbestos Abatement Worker must have attended and received a passing score from an LADEQ recognized training course specifically designed for asbestos workers.

### II. Asbestos Management Plans

A. Identification  
B. Sampling  
C. Assessment  
D. Operations & Maintenance

**II. ASBESTOS MANAGEMENT PLANS**

University structures, buildings, and work areas have been visually inspected and building records and specifications have been checked to determine the presence of ACM. If accessible, the ACM is inspected every six months with corrective action undertaken if needed. Usually, asbestos in walls and voids can only be identified during preparation for demolition. Inspection results are documented in Asbestos Management Plans for each building and can be reviewed by contacting OEHS. Plans are also available by contacting Facilities Services.

Asbestos Management Plans contain extensive information on ACM located in each building and shall be consulted by construction and maintenance personnel prior to performing construction, demolition, or maintenance tasks in identified ACM areas. The management plans in most cases do not contain information on materials assumed to contain asbestos such as floor tiles, roofing materials and materials present in hidden or inaccessible spaces, as these materials were not sampled during the original inspection and were assumed to contain asbestos. Prior to demolition and renovation projects involving such materials, OEHS must be contacted to survey and/or sample suspected materials in these areas. OEHS shall be contacted before initiating work in any known or suspected ACM area.

The following are four major components of an Asbestos Management Plan:

A. **Identification**

Identification of the location and form of ACM discovered in the building.

B. **Sampling**

Results of bulk sampling of suspected material to determine the presence of asbestos and to indicate whether the samples have been analyzed by an NVLAP (National Voluntary Laboratory Accreditation Program) certified testing laboratory.
C. **Assessment**

Assessment of a building’s ACM to establish exposure potential and the necessary remedial or response action required. The assessment may also include air sampling, determinations of air flow patterns, and the condition of the material, as well as the amount of exposed area, accessibility, exposure potential, asbestos content, frequency and duration of exposure, and the number of people exposed.

D. **Operations & Maintenance**

Each Asbestos Management Plan contains an Operations and Maintenance section describing how routine activities may be safely and expeditiously performed by maintenance and other personnel in the ACM area for in-place asbestos.

---

### III. Notification Requirements for Planned and Emergency Projects

Both the University, through the Office of Environmental Health & Safety, and governmental (state and local) authorities must be notified of planned and emergency asbestos projects.

A. **Planned Asbestos Projects**

Notification requirements for planned asbestos projects shall include the following:

1. **Notification to the University**

   Any time there is a possibility that asbestos will be released during a maintenance operation, renovation, demolition, construction, experimental procedures, etc., the Asbestos Coordinator, the University Project Coordinator, or any party becoming aware of a possible release, must notify OEHS. Notification should include:
   a) a description of the ACM that includes size, age, prior use, and any structure to which it may be attached;
   b) approximate amount of ACM present given in square feet or in linear feet in the case of pipe;
   c) scheduled starting and completion dates of the project (schedule might include work on any underlying structure as a separate project);
   d) name of the project’s supervisor;
   e) names of employees to be assigned to the project;
   f) exact location (campus, building, floor, room, etc.) of the ACM;
   g) a description of the material, if any, that will replace the asbestos.

   OEHS’s Asbestos Abatement Liaison or the Asbestos Coordinator, shall convene a meeting to give notification of a planned project to all participating parties, to define responsibilities,
and to make certain that all aspects of the project are fully understood. Participants should include, but not be limited to, the Asbestos Abatement Liaison, the Asbestos Coordinator, the Abatement Contractor, the general contractor, and the University Project Coordinator.

OEHS must be notified of any asbestos removal by outside contractors at least 15 days prior to a request for bids, or, if bids are not requested, prior to the granting of the contract to allow adequate time for OEHS to assist with project coordination and/or monitoring. When asbestos removal projects are to be performed by outside contractors, all parts of this policy shall be enforced through specifications prepared by the Asbestos Coordinator prior to bidding or granting of the contract. OEHS must review all bid proposals to ensure that the contractor's proposal covers all applicable health and safety guidelines. (In the case of a contracted “emergency removal,” OEHS must be notified as soon as possible.)

2. Notification to the State

The University, through the University Project Coordinator, Asbestos Coordinator, OEHS, or the contractor is required to notify LADEQ if asbestos is to be removed anywhere on University property. Written notification must be sent 10 days prior to the start date of removal. All reporting parties must use LADEQ Form AAC-2, Notification of Demolition and Renovation Form.

3. Notification to City of New Orleans

The University, through the University Project Coordinator, Asbestos Coordinator, OEHS or contractor shall ensure notification regarding asbestos requirements to the City of New Orleans.

4. Notification to Contractor

Contractors shall be made aware of known or suspect asbestos containing materials prior to any work activities.

B. Emergency Asbestos Project

Emergency projects may be conducted when necessary due to a sudden, unexpected event involving ACM and shall include the following:

1. OEHS must be notified of any emergency asbestos project prior to the beginning of removal, or clean up activities.

2. Projects limited to the removal of no more than three linear feet of pipe insulation or three square feet of other asbestos material using the glovebag technique and handled as outlined in IV.C below, may operate under an “annual emergency notification” obtained from LADEQ. Waste generated must be disposed of during the same calendar year. Permits must be applied for annually by Facilities Services; they are not automatically renewed by LADEQ.

3. When emergency removals are necessary, a telephone call must be made to LADEQ reporting that an emergency notification needs to be obtained for a specific incident.

4. Emergency projects exceeding the size described in III.B.2 above, may require special emergency notification.
IV. RESPONSE ACTION: MANAGING AN ASBESTOS PROJECT

A. Materials Required

The following should be on hand to ensure safe handling of an ACM project:

1. Personal protective equipment shall include, but not be limited to: a) approved respirators; b) disposable head and shoe covers and gloves; c) full-body coveralls (disposable types are recommended); and d) ANSI approved eye protection.

2. Equipment for the work area: a) 4 mil (minimum) polyethylene sheets to seal off the work area; b) 6 mil (minimum) polyethylene sheets to seal off the floor area; and c) glove bags commercially available for the removal of pipe and joint insulation.

3. Packaging materials: a) shipping containers (usually Department of Transportation drums) approved by OEHS (the type of container needed will depend upon requirements of the disposal site); b) 6 mil thick polyethylene bags or drum liners for lining the drums; c) additional, smaller bags (4 mil thick) for asbestos waste; and d) tape to secure bags of waste.

4. Signs for the work area and labels for containers, drum liners, and bags for holding the asbestos material and waste. Wording on signs and labels is specified by OSHA and therefore OEHS approval is required. All signs will remain intact until the Asbestos Coordinator inspects the job site, declares the job to have been properly and safely completed, and authorizes removal of signs and barriers.

5. Materials for adequately wetting asbestos containing material.

6. A specially equipped asbestos vacuum with high efficiency particulate air (HEPA) filters for clean-up operations.

7. Negative air machine.

8. Decontamination unit with shower.

9. Water filtration unit to filter water used during abatement activities prior to releasing the water down the sanitation sewer.
B. Initial Steps

1. Make certain that all equipment and supplies are ready and all personnel are trained as defined in VI.A-F below. Separate lockers must be provided for street clothing and for work clothing. Shower facilities shall be readily available. Employees must shower each time they leave the work area.

2. The work area is to be sealed off in accordance with plans provided in the asbestos specifications.

3. If there are physical barriers that can prevent unauthorized entry (such as doors), they shall be kept closed with a proper sign attached to the outside. If there is no such barrier, a barricade is to be positioned and a sign placed to keep unauthorized personnel from entering the area. If primary exits are blocked, alternate exits must be made accessible and clearly marked to detour pedestrian traffic.

4. Personnel involved in the project shall wear the appropriate protective equipment before entering the work area. When an employee leaves the work area for any reason, all protective equipment is to be removed prior to departure. Disposable equipment must be discarded in the proper waste container and personnel shall appropriately decontaminate themselves and all non-disposable equipment. A clean set of clothing and disposable protective equipment is needed before re-entering the work site.

5. Activities prohibited in the work area include: smoking, chewing of gum or tobacco, eating, drinking, applying cosmetics, or using toilets in the work area.

C. Removal

1. All removal shall be done with asbestos material in a wet state. The asbestos material shall be wetted with an appropriate amended water solution available from an asbestos removal supply company. A soapy water solution may be used in lieu of an amending solution. Asbestos materials shall be adequately wetted to prevent fiber dispersal during removal.

2. The material must be removed in small sections. Care must be taken to prevent fiber dispersal during removal.

3. Removed material and related waste materials (such as protective clothing, plastic sheets, etc.) must be properly packaged at the work site for later disposal.

4. For asbestos material placed in drums, the containers shall be lined with 6 mil thick drum liners. Each bag or drum must be labeled with an approved label. A generator label identifying the institution’s name (Tulane), address, specific building name, and a contact’s name and phone number must also be attached. The bags shall be closed goose-neck fashion with tape or ties.

5. Information about drum contents shall be placed on the outside of the drum and on paperwork attached to the drum. Each container, when filled, shall be properly sealed and labeled with OSHA approved labels.
6. Containers must be stored in a suitable location accessible only to authorized personnel until pickup is arranged by OEHS, the Asbestos Coordinator, or the University Project Coordinator.

7. During a glovebag removal, personal air monitoring, and/or area monitoring may be used to represent the fiber levels present in the work area.

8. Any non-disposable equipment must be thoroughly cleaned/decontaminated before removal from the work area. Any materials not used in the immediate work area, such as the signs and barricades, can be returned to storage.

D. **Work Site Decontamination**

Following removal, the work area must be properly decontaminated before any individuals are allowed to reenter the area. Decontamination procedures include:

1. All surfaces are to be wet cleaned and/or HEPA vacuumed. The work area must then be left undisturbed for 24 hours to allow dust to settle.

2. All surfaces are to be wet cleaned and/or HEPA vacuumed a second time, and *again*, the work area must be left undisturbed for another 24 hours to allow dust to settle.

3. An inspection shall be performed by OEHS, the University Project Coordinator, and/or the Asbestos Coordinator to ensure that no settled dust/fibers or airborne dust/fibers are present.

4. The work surfaces and the top layer of plastic will be encapsulated using a spray-on encapsulant to lock-down any residual fibers that may remain.

5. Negative air machines should remain operating during the removal process.

6. All polyethylene material, tape, disposable equipment, contaminated cleaning rags, etc., must be properly packed, sealed, labeled, and shipped as asbestos waste.

7. Aggressive air sampling shall be conducted, when required, to determine if the ambient air fiber level is at or below acceptable permissible exposure limits.

8. If settled or airborne dust/fibers are present, cleaning shall continue until fiber levels are within regulatory limits. Upon determination of satisfactory airborne fiber levels, the area may be re-opened.

E. **Air Monitoring**

1. Air monitoring must be performed for each project in accordance applicable regulations and according to specifics indicated in the project design.

2. In order to document the exposure conditions relative to the asbestos removal, air monitoring may be conducted by OEHS before, during, and after the project. The air monitoring shall establish a baseline, monitor-worker exposure, and ensure safe levels following the project.
3. If, for any reason, an outside monitoring company is used to monitor a job, OEHS shall audit the contract monitoring sites and shall review, with the Asbestos Coordinator, all results that must be provided by the contract monitoring firms. The final clearance decision shall be made by the Asbestos Coordinator in consultation with OEHS.

4. OEHS shall receive all project design information, including scope of the job and monitoring results associated with an asbestos abatement project. OEHS shall maintain the Asbestos Management Plans for all Asbestos Hazardous Emergency Response Act (AHERA) covered facilities.

5. Sampling shall be based on good industrial hygiene practices, and shall include sampling of 20% of the workers. Air samples shall be taken in a worker’s breath zone. Area samples shall also be taken.

6. Sampling and analysis shall be conducted according to practices approved by EPA, OSHA, and LADEQ. Employees shall have a reasonable opportunity to observe monitoring and shall have access to monitoring records.

7. Airborne fiber levels shall be within regulatory limits before unprotected persons are allowed into a project area.

8. Records of the sampling and results are to be kept for the length of employment plus 30 years. Employees shall be notified of sampling results as soon as possible.

F. Waste Disposal

All ACM waste shall be handled through a waste disposal vendor authorized by OEHS and Facilities Services who is fully qualified to handle hazardous materials and who shall make certain that the material is disposed of in an approved landfill in accordance with applicable regulations and University policies and procedures.

FORMS OF ASBESTOS

Of the two forms of asbestos used commercially--friable and non-friable--friable asbestos presents the greater risk as it may be crumbled, pulverized or reduced to a powder under normal hand pressure. When disturbed, as by vibration, air current, or other means, asbestos fibers become airborne and enhance the threat of exposure. Non-friable asbestos, which is bound in a matrix, does not represent a hazard unless it is damaged and rendered friable.
V. Medical Examinations

A. Medical Testing
B. Criteria for Determining Requirement for Medical Exam
C. Requirements for Examination by Licensed Physician
D. Time Frame for Providing Test Results
E. Exemption from Test Requirement
F. Physician's Determination Re Respirator Usage
G. Availability of Physician Information

V. MEDICAL EXAMINATIONS

A. The University, at each department's expense, shall provide all required medical testing for University employees working with asbestos. A current medical examination is required of all employees who shall be included on the asbestos worker list.

B. Exposure levels and the need to use respirators shall be the criteria for determining whether a medical examination is required.

C. A comprehensive medical examination performed by a licensed physician is required for employees exposed to asbestos above the action level and for employees required to use an air purifying respirator. This examination must include:
   1. a chest x-ray (posterior-anterior 14 x 17 inches) administered at the discretion of the examining physician. The x-ray is to be read by a B Reader, board eligible/certified radiologist or a pneumonoconiosis experienced physician. The qualified radiologist shall have immediately available for reference a complete set of the ILO-U/C International Classification of Radiographs for Pneumonoconioses, 1980, and shall classify the films in accordance with the Roentgenographic Interpretation Form: Form CSD/NIOSH (M) 2.8.;
   2. medical history to elicit symptomatology of respiratory, cardiovascular, and gastrointestinal disease.
   3. a mandatory medical questionnaire;
   4. pulmonary function tests that include FVC and FEV;
   5. cardiovascular and/or digestive system tests if deemed necessary by the physician; and
   6. any additional tests deemed necessary by the examining physician with regard to asbestos exposure.

D. Tests outlined in V.C. 4-6 above, must be provided within 30 days of initial employment or assignment to a job that results in asbestos exposure or the use of an air purifying respirator, and annually thereafter.
E. No examination is required if there are adequate records showing that an examination, within the scope required, has been conducted within the past year.

F. A physician shall determine whether an employee is physically capable of working while wearing a respirator. This determination shall be reviewed at least annually.

G. Any physician who conducts an examination in accordance with OSHA provisions shall provide the University any information required by OSHA standards and any other information relative to the employee's asbestos exposure. The physician shall not, however, reveal specific findings of diagnoses unrelated to occupational exposure.

VI. Training

A. LADEQ Approved Training
B. Previously Trained Employees
C. Awareness Training
D. Training in the Use of
   Personal Protective Equipment
   and Respiratory Protection
E. Mandatory Attendance

VI. TRAINING

A. All employees who “disturb” and/or involved in asbestos related work activities must first be trained prior to performing any asbestos work activities in accordance with applicable federal, state, and local regulations in the appropriate discipline.

B. Supervisors, abatement workers, contractors, designers, inspectors, and management planners must have attended and received a passing score from an LADEQ recognized training organization providing instruction specifically for the appropriate discipline.

C. Previously trained employees who continue to perform asbestos related activities shall receive refresher training in accordance with applicable regulations.

D. All employees who work in an area where asbestos is located, but who do not disturb or touch the material, are required to attend a minimum two hour asbestos “awareness” training session.

E. Any workers required to wear a respirator or other personal protective equipment must be trained by an individual knowledgeable in PPE and respirators. For asbestos activities, workers shall be fit tested every six months.
VII. Recordkeeping

A. Exposure Measurement Records

- All records relating to exposure measurements taken to monitor employee exposure to asbestos must be maintained for the length of employment plus 30 years. Exposure measurements must include the following: 1) date of monitoring; 2) operation or project performed; 3) sampling and analytical methods; 4) personal protective equipment in use; and 5) name and social security number of employee monitored or represented.

B. Medical Surveillance Records

- Medical surveillance records must be maintained for the employee's duration of employment plus 30 years. The records shall be retained by Medical Records and Radiology and made available to authorized representatives of NIOSH and OSHA as well as to the employee's physician upon request of the employee. Records must include the following information: 1) name and social security number of employee represented; 2) a copy of medical test results and physician's interpretations; 3) any employee medical complaints; and 4) a copy of any information provided to physician for interpretation.

C. Training Records

- All records relating to training of employees must be submitted to and retained by OEHS for a minimum of one year past the date of employment. Training records shall be maintained by OEHS.