

ASBESTOS MANAGEMENT PLAN

SAN JOSE STATE UNIVERSITY
Environmental Health & Occupational Safety

Asbestos Management Plan

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ASBESTOS MANAGEMENT PROGRAM

1.0 INTRODUCTION

- 1.1 Asbestos is a general term applied to a group of naturally occurring minerals which separate into fibers. This fibrous material (e.g., amosite, chrysotile, crocidolite, tremolite, anthophyllite, actinolite) is composed of silicates of aluminum, magnesium and other metals which are incombustible and very difficult to destroy or degrade.

Asbestos has a tendency to break into a dust of tiny fibers which can float in the air and be inhaled or swallowed. Asbestos inhalation exposure has been shown to increase the risk of developing lung cancer, mesothelioma (cancer of the lining of the lung and/or abdomen.) and asbestosis (chronic lung disease). Exposure occurs by breathing asbestos fibers produced as a fine dust when asbestos is handled during fabrication, installation or removal.

Asbestos Containing Materials (ACMs) are found in buildings in three forms:

- a) sprayed or trowled on ceiling and walls (surfacing material);
- b) in mechanical insulation around hot or cold pipes, ducts, boilers, and tanks (pipe and boiler insulation); and
- c) in a variety of other products such as ceilings, floor tiles, and wall boards (miscellaneous materials).

The first two types of asbestos pose the greatest risk of exposure; especially if the asbestos becomes friable. Friable materials can be crumbled, pulverized, or reduced to powder by hand pressure. All of the materials mentioned above have the potential to become friable during renovation, installation, and maintenance activities.

2.0 POLICY

- 2.1 It is the policy of San Jose State University to protect its faculty, staff, students, and visitors from any hazardous exposure to asbestos dust (fibers) and to eliminate asbestos-containing materials on campus.
- 2.2 Administrative and Engineering controls will, whenever feasible, be applied to comply with local, state and, federal requirements.

3.0 RESPONSIBILITIES

SJSU has the responsibility to eliminate or reduce occupational exposures to asbestos in accordance with all federal, state, and local laws as defined by regulatory agencies including, but not limited to, the following agencies:

3.1 Environmental Protection Agency (EPA)

The EPA must be notified of renovations involving disturbance of asbestos-containing materials in public and commercial buildings if the project involves 160 square feet or 260 linear feet or more of friable asbestos-containing materials. The EPA must also be notified of **all** demolition projects.

3.2 Bay Area Air Quality Management District (BAAQMD)

The BAAQMD is the primary local authority for the enforcement of NESHAPS (National Emissions Standards for Hazardous Air Pollutants Standard) regulations.

BAAQMD regulations apply to the same class of buildings as those of the EPA, and for any renovations involving the disturbance of asbestos-containing materials.

The BAAQMD, like the EPA, regulates asbestos removal and disposal procedures.

3.3 California Occupational Safety and Health Administration (Cal/OSHA)

Cal/OSHA enforces Labor Code Sections 6501.5 et. seq. requiring contractors and employers to register with Cal/OSHA prior to disturbing asbestos-containing materials in quantities greater than 100 square feet of surface area.

Cal/OSHA also regulates occupational exposure to asbestos for employees in California.

3.4 (Federal) Occupational Safety and Health Administration (OSHA)

OSHA issues national standards for occupational exposure to asbestos.

3.5 California Department of Health Services (DHS)

The DHS regulates the transport and disposal of hazardous waste. Friable asbestos-containing material greater than 1% by weight is a hazardous waste under California regulations.

Building owners or their contractors abating asbestos are required to obtain a Hazardous Waste Generator ID number from DHS and to use a licensed Hazardous Waste Transporter to transport asbestos wastes.

3.6 California State Licensing Board

The State Licensing Board enforces the provisions of California Business & Profession Code which require contractors licensed by the state be certified for engaging in asbestos abatement for any work disturbing more than 100 square feet of surface area of asbestos-containing materials.

3.7 California AB 3713, AB 1564 (Health & Safety Code 25915 et seq.)

Owners and persons leasing public or commercial buildings (constructed prior to 1979) in California must notify their employees and contractors of the presence of asbestos-containing construction materials in their building.

Notices must be given:

- a) Within 15 days of the first receipt of information regarding the presence of asbestos-containing construction material by owner or lessee.
- b) To new owners within 15 days of the date of the ownership agreement and to new employees within 15 days of the date they commence work.
- c) Within 15 days of any quarter in which supplemental information is obtained.
- d) On an annual basis.

3.8 Environmental Health & Occupational Safety's (EH&OS) Industrial Hygienist

The Industrial Hygienist shall:

- a) Develop, document, update, announce, and disseminate various mandated guidelines and manuals in conjunction with SJSU policies and local, state and federal regulations.
- b) Conduct evaluations and surveys of the work place for asbestos hazards.
- c) Coordinate, review, and monitor program designs, and/or repair and alteration projects to ensure compliance with applicable local, state, and federal standards and regulations when asbestos-containing materials are involved and interfaces with vendors and contractors.
- d) Ensure annual notification to all campus employees informing them of the known presence and locations of asbestos-containing materials (ACM) in campus facilities. The notification procedures are outlined in Section II.
- e) Inform the Division of Occupational Safety and Health's Occupational Carcinogen Unit that carcinogens are used by campus facilities.
- f) Conducts appropriate hands-on training for workers engaged in asbestos-related work.
- g) Compiles and maintains database(s) on asbestos locations, inspections, personnel exposures, training documents, medical exam clearances, analytical lab results, etc..
- h) Coordinates with medical providers and Departments to ensure that medical exams are provided to designated employees in the mandated time frame.

3.9 Administrators and Management Personnel Responsible for Campus

Facilities shall:

- a) Ensure that strict adherence to asbestos safety and health requirements is followed by supervisors and employees whose work may potentially expose them to asbestos.
- b) Provide and maintain facilities and equipment in a manner affording protection from asbestos hazards to all workers.
- c) Ensure that installed asbestos is removed.
- d) Ensure that personnel engaged in asbestos-related work are provided and use proper respiratory protective equipment and protective clothing.
- e) Restrict access to asbestos-containing materials.
- f) Ensure proper and legal disposal of all asbestos-containing waste.

3.10 Procurement and Support Services Officers

shall:

- a) Ensure that asbestos-free materials are procured
- b) Ensure that contracts include proper insurance requirements
- c) Ensure that proper notifications are made to regulating agencies by asbestos contractors.

3.11 Facilities Development and Operations

shall:

- a) Ensure that all contracts involving or likely to involve asbestos-containing materials meet at least the minimum requirements of regulating agencies.
- b) Ensure compliance with the Office of the Chancellor's policies and procedures for Campus Administration of Asbestos Abatement Contracts.
- c) Ensure compliance with the Asbestos Consent Decree

3.12 Project Managers

shall:

- a) Make written requests to EH&OS for approval of asbestos abatement activities. A written response from EH&OS shall be provided prior to the start of any abatement activity.
- b) Ensure that contractors and tradespeople comply with all regulating agencies, contract specifications, and campus requirements.

- c) Maintain contract records, submittals, and notifications to regulatory agencies.
- d) Ensure compliance with the Office of the Chancellor's policies and procedures for Campus Administration of Asbestos Abatement Contracts.

3.13 Contract Officers

shall:

- a) Ensure compliance with the Office of the Chancellor's policies and procedures for Campus Administration of Asbestos Abatement Contracts.

3.14 Supervisors

shall:

- a) Make written requests to the EH&OS for approval of asbestos abatement activities. A written response from EH&OS shall be obtained prior to the start of any abatement activity.
- b) Ensure compliance with SJSU's Health and Safety programs regarding asbestos abatement work activities (i.e. Respiratory Protection, Injury and Illness Prevention, Medical Surveillance, and Confined Spaces Programs).
- c) Ensure that persons conducting asbestos-related activities have current training and medical documentation prior to performing asbestos-related activities.

3.15 Certified Asbestos Workers

shall:

- a) Have successfully completed the 5-day, contractor/supervisor or worker course offered through Facilities Development and Operations.

This training shall include:

- i. Identifying asbestos hazards
- ii. Posting work areas
- iii. Removing asbestos under controlled conditions
- iv. Personal protective equipment and respirators
- v. Providing emergency clean-up of damaged ACM
- vi. Follow the protocols identified in Asbestos Requirements for Trade Employees.

3.16 Trade Employees & Custodial Staff

shall:

- a) Be responsible for identifying potential hazards in the work place to minimize health risk to themselves and other employees. Each employee shall make an effort to report any damaged building materials to FD&O management.

4.0 CONTRACT ADMINISTRATION

4.1 Asbestos Removal Contracts

All projects that require the removal or disturbance of asbestos containing materials greater than 100 square feet or 100 linear feet require a contract.

4.2 Any asbestos removal contract shall be prepared by a certified asbestos consultant, hired by the University, who shall meet the following minimum requirements:

- a) Have current certification with the Division of Occupational Safety and Health (DOSH) and be able to show proof that the consultant has maintained all required EPA-approved certification courses including refresher courses.
- b) Be an independent third party consultant with no affiliation to the asbestos abatement contractor or be a campus representative who is competent and proficient in industrial hygiene and safety requirements.

4.3 Contract Specifications shall include, at a minimum, the following:

- a) Summary and Defined Scope of Work
- b) Submittals

1. Pre-Contract Submittals

The name of the Project Superintendent and Verification of completion of an EPA-approved contractor/supervisor certification course or equivalent, including a minimum of one year on-the-job experience.

Submit copies of insurance coverage, including automotive liability, workers' compensation, comprehensive general liability, special endorsement, and environmental impairment liability insurance equal to \$1,000,000 and other coverages as required.

2. Pre-Work Submittals

Show a complete sequence of construction (listed by activity) including dates for the beginning and completion of each major element of the abatement project (set-up, removal, testing, clearance, replacement).

Submit copies of notices required by federal, state, and local regulations together with proof of timely transmittal to agencies requiring notification.

Provide a list of persons who will be employed by the contractor and his subcontractors for removal work. Present evidence that workers have received proper training and required medical examinations.

3. Close-Out Submittals

Submit copies of waste disposal manifest.

Submit OSHA compliance air monitoring results obtained from samples taken during abatement activity.

- c) Air Monitoring and Area Clearance
- d) Throughout the removal and cleaning operations, air monitoring shall be conducted by the Consultant to maintain compliance with job specifications and government regulations.
- e) The Consultant shall provide personal air monitoring for his employees.
- f) Abatement Procedures
- g) Contractor must comply with all federal, state, and local regulations during all work-related activity.

5.0 IN-HOUSE ASBESTOS PROJECTS

5.1 Any disturbance of asbestos-containing materials not exceeding 100 square feet or 100 linear feet shall be considered as a small-scale abatement project.

5.2 All employees engaged in small-scale projects shall be in compliance with California Code of Regulations Title 8 Section 1529 and must meet the following minimum requirements:

a) Medical Surveillance Program

SJSU shall provide a medical surveillance program for all employees who are or may be exposed to asbestos.

Physical examinations shall be provided by SJSU's Health Services facility.

Physicals shall be provided annually (within 365 days of previous examination) by a licensed physician and at no cost to the employee.

The medical examination shall include:

- a. A medical and work history
- b. A complete physical examination with emphasis on the respiratory system, the cardiovascular system, and the gastrointestinal system.
- c. Completion of the Initial Medical Questionnaire provided in CCR Title 8 Section 5208
- d. A chest x-ray
- e. Pulmonary function test
- f. Additional tests at the discretion of the physician

b) Respiratory Protection

Respirators shall be provided to all employees engaging in removal or disturbance of asbestos-containing materials. Respirators shall be provided at no cost.

Respirator use shall be in compliance with SJSU's Respiratory Protection Program.

SJSU shall select respirators from among those jointly approved for protection against asbestos by the Mine Safety and Health Administration and by the National Institute for Occupational Safety and Health (NIOSH).

c) Training

The University shall institute a training program and ensure the participation of all employees who are or expected to be exposed to asbestos. Training shall be conducted at the time of initial assignment and at least annually (within 365 days) thereafter in a manner and language understandable to all employees.

Employees engaged in asbestos removal projects or employees that may reasonably expect to be exposed to asbestos at or above the action level and/or excursion limit shall be provided a certified worker or contractor/supervisor course in substitution for the above-mentioned training. The course must be provided by a qualified instructor.

For more specific University training requirements, see Section IV.

5.3 In-House Abatement Procedures

- a) These procedures shall apply to asbestos-containing building materials less than 100 square feet or 100 linear feet or when disturbance of ACM dust and debris or unintentional contact with asbestos occurs.

Departments shall make written notification to EH&OS. The Asbestos Project Notification form shall be used for all requests.

The work shall be scheduled after normal business/working hours when feasible.

The access to the work area shall be demarcated to control unauthorized access.

Signs shall be posted outside the work area and shall read:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
KEEP OUT
RESPIRATORS AND PROTECTIVE CLOTHING
ARE REQUIRED IN THIS AREA

The building's air-handling system should be shut off or temporarily isolated to prevent the distribution of any released fibers outside the work areas.

A 6-mil polyethylene plastic drop sheet shall be placed below the location of removal activity extending at least 10 feet beyond all sides of the removal area (method not applicable for floor tile removal).

All work area surfaces shall be pre-cleaned. All loose debris shall be removed and bagged. The floor shall be cleaned and covered with 6-mil sheeting.

A sealed enclosure ("clean cube") constructed of 6-mil plastic on a frame can be positioned around the maintenance area to inhibit the spread of asbestos fibers. The clean cube is kept under negative pressure by the use of a HEPA vacuum or other HEPA-filtered means.

In certain instances a glove bag may be required for removal of friable asbestos materials inside the clean cube.

Workers shall wear approved respiratory protection and protective clothing including a full disposable suit, hood, boots, and gloves.

If asbestos-containing material is located in an area above suspended ceiling tiles, entry tiles shall be removed carefully with as little jarring as possible. Mist air above the removed ceiling tiles and mist the tiles or ceiling areas above and surrounding areas likely to be exposed to the opening. A thorough misting of the air helps fibers to settle more quickly. Cleaning ceiling tiles with a HEPA vacuum is also an effective method of removing loose debris.

Selected workers shall wear personal monitors.

Representative samples will be taken on selected individuals performing particular tasks to ensure that employees do not exceed the Permissible Exposure Limit (PEL) of 0.2 fiber/cc based on an eight-hour, time-weighted average and the 30-minute excursion limit of 1.0 fiber/cc.

The plastic sheets shall be wiped with damp cloths, encapsulated, folded, and discarded as asbestos waste.

Upon completion of the work, any visible debris on the top of the suspended ceiling, on the drop cloth, on the floor, or on any surface shall be collected by cleaning with a HEPA vacuum and/or a damp cloth.

All equipment and tools will be wiped with damp cloths or HEPA-vacuumed.

All debris, cloths, and vacuum bags/filters shall be discarded in sealed and labeled plastic bags as asbestos waste.

Workers shall vacuum their disposable suits before leaving the work site and discard them as asbestos waste.

Respirator filter cartridges shall be taped. The respirators shall be wiped or rinsed off according to manufacturer's instructions. The filter cartridges shall be disposed of as asbestos waste.

Personal sample cassettes are to be submitted to an AIHA accredited laboratory for PCM analysis by NIOSH method 7400.

Trade employees involved in asbestos disturbance shall comply with all safe protocols for asbestos handling.