

EH&S ASBESTOS SERVICES PROGRAM

PURPOSE

The Asbestos Services Section, which is part of the Clinical and Industrial Hygiene Program, is responsible for providing services to the campus community related to the assessment and control of hazardous building materials used in construction. These services include: pre-renovation/demolition building surveys for asbestos, lead and PCBs; establishment and implementation of a hazardous building material abatement specification; oversight of abatement contractor operations during hazardous building material removal; and clearance air monitoring following completion of abatement tasks.

DEFINITIONS

Asbestos - Any of a group of asbestiform minerals, alone or in combination, including chrysotile, amosite, crocidolite, tremolite, anthophyllite and actinolite.

Asbestos-Containing Building Material (ACBM) - Any manufactured building material that contains more than 1 percent asbestos by weight (>1%).

Asbestos-Containing Construction Material (ACCM) - Any manufactured construction material that contains more than one tenth of one percent (0.1%) asbestos.

Clearance Air Monitoring - Process whereby the concentration of airborne asbestos particles is determined in order to evaluate compliance with pre-set air quality specifications or standards.

Containment - An enclosure usually constructed of framing material and fireproof rated plastic (visqueen) and equipped with air filtration machines capable of maintaining an internal negative pressure differential as compared to the outside environment.

Contract - A binding written agreement between two or more parties, namely the University and independent contractor(s).

Demolition - The removal of building structural components including, but not limited to a least one load-bearing member.

Hazardous Building Materials - Materials, such as asbestos, lead and polychlorinated biphenyls, which are classified as hazardous by one or more regulatory agencies and incorporated into building construction products.

Renovation - Any process whereby building materials are disturbed or removed in order to perform refurbishing activities.

Specification - A written contract document, which defines a contractor's requirements and responsibilities for performance and successful completion of a designated scope of work.

Survey – A process by which building components or conditions are evaluated (e.g., ACBM), either by visual inspection, sampling or a combination of both, to determine presence of

hazardous materials.

POLICY GUIDELINES

Governmental Regulations

A. Federal

- 1) 29 CFR 1926.1101, Asbestos Standard for the Construction Industry.
- 2) 29 CFR 1910.1001, Asbestos Standard (General Industry).
- 3) 29 CFR 1910.134, Respiratory Protection Standard.
- 4) 40 CFR Part 61, Subpart M, "National Emission Standards for Hazardous Air Pollutants" (NESHAPS).
- 5) 40 CFR Part 763, "Asbestos Hazard Emergency Response Act" (AHERA), "Worker Protection Rule", and "Revised Model Accreditation Plan".
- 6) 40 CFR, Section 261 (Hazardous Waste).

B. State

- 1) 8 CCR Article 4, Section 1529, Asbestos Standard (Construction Industry).
- 2) 8 CCR Article 110, Section 5208, Asbestos Standard (General Industry).
- 3) 8 CCR Section 1531, Construction Safety Orders (Use of Respirators)
- 4) 22 CCR Sections 66261 and 66268 (California Asbestos Waste Handling Procedures (Cal/EPA-DTSC).
- 5) California Health & Safety Code, Sections 19827.5, 25163, 25359.7, 25914(1-3), and 25915.
- 6) Business and Professional Code, Sections 7058.5 and 7180 et.seq.
- 7) California Labor Code, Section 6501.9.
- 8) California Safe Drinking Water and Toxic Enforcement Act of 1986 "Proposition 65".

C. Local

- 1) Bay Area Air Quality Management District (BAAQMD), Regulation 11, Rule 2, Hazardous Pollutants, Asbestos Demolition, Renovation and Manufacturing.

UCSF Internal Standards

The Asbestos Section operates under the general policies and procedures of the University of California and the UCSF Office of Environment Health and Safety (OEHS&S).

SERVICE METHOD AND FREQUENCY

Routine

The Asbestos Section does not provide any routine services.

Non-Routine

Asbestos services are provided on a request basis and are therefore driven by the needs of the campus community. Although any UCSF department may request services, the majority of asbestos work requests originate from departments responsible for building acquisition, renovation and/or new construction, namely Real Estate Services, Facilities Management and the UCSF Medical Center Office of Design & Construction.

UCSF departments requesting services submit an "Asbestos Project Request/Approval form". The Request for Services form defines the scope of work and initiates the start of OEH&S involvement in a project. The request form should have an attached building plan identifying locations requiring services for asbestos building material surveys (e.g., project floor plan) A copy of the form is included as Appendix 1.

PROCEDURE

The Asbestos Section provides services related to the assessment and control of hazardous building materials used in construction. Asbestos services are summarized as follows:

When PACM is Encountered

ACBM may pose a threat to your health, only when asbestos fibers become airborne due to material aging, deterioration, or as the result of damage.

Airborne asbestos in campus buildings is virtually nonexistent under normal working conditions. Even when ACBM is disturbed, testing reveals extremely low asbestos fiber content when compared to industrial workplaces where serious health effects such as lung cancer and asbestosis have been observed.

However, to further minimize the risks of exposure to workers, it is important for employees to understand and follow proper work practices to keep the potential for disturbing ACBM at a minimum. PACM may exist in any pre-1980 contracted buildings (ceiling and floor tiles, mastics, pipe and HVAC insulation, sinks, seam caulk/surface spray, sheet rock, lath plaster walls/ceilings, counter tops, rope packing, etc.)

1. Isolate and control area to prevent disturbance by other occupants, contractors, etc..
2. Avoid touching suspected asbestos materials on walls, ceilings, pipes or boiler coverings. If you're not sure of its content, contact your supervisor. Contact EH&S at 476-1300 during normal work hours from 8am – 5pm. Contact UCPD at 9-911 during off hours.
3. Do not drill holes, hang plants or other objects from wall/ceilings made of suspected ACBM.
4. Do not disturb ACBM when replacing light bulbs.

5. If you notice what you believe may be damaged asbestos material or asbestos debris, do not disturb it. Contact your supervisor and EH&S.

If you find ACM that has been damaged report it to your supervisor and EH&S. Only persons authorized and properly trained should perform any work which may disturb asbestos materials.

Pre-Renovation/Demolition Building Surveys

The Asbestos Services Section provides visual inspections and sampling to determine if asbestos-containing building materials are present within areas scheduled for renovation or demolition. Survey reports which detail inspection findings, hazardous material locations and recommendations are provided to the renovation project manager who, in turn, includes them in contract documents. Asbestos Services Section team members receive certified building inspection training as mandated by federal regulations and follow procedures established by the U.S. Environment Protection Agency (U.S. EPA) as defined in 40 CFR Part 763 (ASHERA). Asbestos bulk samples are submitted to a laboratory, which is certified by the National Institute of Standards and Technology (NIST) under the U.S. EPA's National Voluntary Laboratory Accreditation Program (NVLAP). Standardized forms to document various aspects of the inspection process are used by Asbestos Services Section team members and included as Appendix 2.

Inspection for lead, PCBs, and mercury is also included as part of the building survey process. Specific procedures related to these hazardous materials survey are discussed separately.

Implementation of Project Specifications

The Asbestos Services Section has developed a standard hazardous building material abatement specification for use by renovation project managers. The abatement specification is found in Section 02080 for the main campus (Facilities Management Major Projects) and in Section 01080 for Medical Center projects (Design and Construction Projects) of UCSF general construction specification and details the University's procedures for safe removal and disposal of regulated hazardous building materials. It includes provisions authorizing OEH&S to perform oversight and air monitoring for compliance during abatement operations. The specification is updated as needed by the Asbestos Services Section Supervisor in order to stay current with changing federal, state, and local regulations. A copy of the specification is included as Appendix 3.

Hazardous Material Abatement Oversight

The Asbestos Services Section provides oversight of abatement contractors during the removal of hazardous building materials. Oversight services include: review of contractor submittals; attendance and consultation during pre-bid job walks, pre-construction meetings, and progress meetings; approval of work plans; containment inspections, progress inspections and final (work completion) inspections; and clearance air monitoring. Asbestos Services Section team members receive certified abatement supervision training as mandated by federal regulations and follow procedures established by the U.S. Environment Protection Agency as defined in 40 CFR Part 763 (ASHERA). Standardized forms to document various aspects of the oversight and air sampling process are used by Asbestos Services Section team members and included as Appendix 4.

Asbestos Air Monitoring

The Asbestos Services Section provides asbestos air monitoring following completion of an abatement operation (clearance air monitoring) in order to determine compliance with specified air quality standards. The Asbestos Services Section can also provide ambient air monitoring to evaluate potential Environment contamination or ensure compliance with existing exposure standards if requested. Area air monitoring is conducted in accordance with NIOSH Method 7400 (PCM), NIOSH Method 7402 (TEM) and/or the EPA Method as stated in the Asbestos Hazard Emergency Response Act (AHERA TEM Method), 40 CFR Part 763 Subpart E, Appendix A, and Yamate Level 2 (Modified AHERA Method). Asbestos air samples are submitted to a laboratory, which is certified by NIST under the U.S. EPA's NVLAP Program. Copies of the above referenced methods are included as Appendix 5.

PROGRAM ADMINISTRATION

Organization and Responsibilities

The Asbestos Services Section is part of the Clinical and Industrial Hygiene Program in the UCSF Office of Environment Health and Safety (OEHS). Asbestos Services Section team members report to the Asbestos Services Section Supervisor who, in turn, reports to the Clinical and Industrial Hygiene Program Specialist.

The Asbestos Services Section Supervisor is responsible for day-to-day operations of the asbestos program including: program development and implementation; work assignments; material and equipment acquisition; and overall group management. Asbestos Services Section team members are responsible for providing specific services under the direction of the Asbestos Services Section Supervisor.

Record Keeping

All documentation related to the Asbestos Services Program including, but not limited to request forms, survey reports, correspondence, laboratory analysis reports, inspection checklists and miscellaneous project documents are maintained in individual project file folders. The project files are organized by building and date and housed in filing cabinets located near the Asbestos Services Section Supervisor's office. It is the Asbestos Services Section Supervisor's responsibility to create and maintain project files.

Closed project files are moved to archive after four years. The Asbestos Services Section maintains project files active or closed within the last four years in the OEHS Office. All files are required to be stored for a minimum of 30 years.

Equipment

The Asbestos Services Section utilizes the following types of equipment. Specific equipment inventories are included within the individual method SOPs.

- 1) High volume (8-11 lpm) sampling pumps
- 2) Low volume (0.5-4 lpm) sampling pumps
- 3) Electric leaf blowers (1 hp)

- 4) Equipment carts
- 5) Precision rotometers
- 6) Pump stands
- 7) Extension cords and ground fault interrupters
- 8) Digital Camera
- 9) Various small hand-held tools

Training

Federal regulations require training certified by the U.S. Environment Protection Agency for any individual who performs asbestos inspections or abatement oversight in public or commercial buildings. All Asbestos Services Section personnel receive the appropriate training prior to performing this type of work. The Asbestos Services Section Supervisor maintains current copies of training certificates and schedules initial training and annual refresher training for Asbestos Services Section personnel as needed.

Certified training is divided into four separate categories as follows:

- **Building Inspector:** Persons who inspect a facility for asbestos either visually or by collecting samples (3 day initial course followed by 1/2 day annual refresher).
- **Management Planner:** Persons, who review the building inspectors report or raw data, evaluate existing or potential hazards and determine the appropriate response action (2 day initial course followed by 1/2 day annual refresher). The Building Inspector course is required as a pre-requisite to this course.
- **Project Designer:** Persons who design asbestos abatement projects (4 day initial course followed by 1 day annual refresher). This course is most applicable to asbestos abatement contractors.
- **Contractor/Supervisor:** Persons who supervise asbestos abatement work (5 day initial course followed by 1 day annual refresher).

New personnel also receive program specific in-house training from the Asbestos Services Section Supervisor and may receive other additional training as required by OEH&S, i.e., emergency response, hazard communication, respiratory protection, etc. New personnel are not allowed to work independently until they have demonstrated an adequate knowledge and skill of their assigned tasks and the Asbestos Services Section Supervisor is confident they can perform their job in a competent and safe manor.

DATA MANAGEMENT

Individual Asbestos Services Section team members are responsible for completing project checklists and related documentation, submitting samples for analysis, reviewing analytical data and preparing reports. The Asbestos Services Section Supervisor reviews all reports and related documentation for accuracy and completeness prior to filing or submission to the

individual requesting services.

The Asbestos Services Section Supervisor is responsible for preparing all correspondence to outside individuals or agencies. Depending on the nature of the correspondence, the Clinical and Industrial Hygiene Program Specialist and/or the OEH&S Director may also review such correspondence prior to submission.

RECORD RETENTION

A. Air Monitoring Reports (Personnel Exposure Records)

The asbestos abatement contractor or the Asbestos Services section of Clinical and Industrial Hygiene Program conducts air monitoring. The report is written and is usually provided to the affected employee or enclosed to an asbestos abatement project. Such reports are kept by the Asbestos Services Section for 30 years.

B. Incident Reports

Incident reports other than personnel exposure are attached to a specific asbestos abatement project. These reports are kept for 30 years at the Asbestos Services section of Clinical and Industrial Hygiene Program

C. Permits and Licenses

Permits, licenses, and other asbestos contractor related documentation for asbestos abatement is normally submitted by the contracted asbestos abatement contractor, prior to start of any abatement related activities. The Asbestos Services staff checks them for accuracy, completeness, and for regulatory compliance requirements. These permits and licenses are kept with the project binder for 30 years.

D. Disposal Manifests

Copies of the disposal manifests are kept for 30 years in the asbestos project binder. The Chemical Waste section of Hazardous Material Management Program (HMM) keeps the original manifests.

E. Medical Surveillance

The asbestos abatement contractor(s) submit its employee's medical surveillance reports to the Asbestos Services section of Clinical and Industrial Hygiene Program as part of the asbestos abatement contract. Clinical and Industrial Hygiene Program staff compiles the reports with the project file and kept for a period of 30 years. Abatement contractors keep their employees medical surveillance reports for 30 years as required. At the present, UCSF employees do not perform asbestos abatement.

F. Training Records

Asbestos Services section staffs of Clinical and Industrial Hygiene Program are current on asbestos required training. Yearly recertification is required for all asbestos services staff. The

training records are kept in their personal file, as well as, with the Asbestos Services section group leader for 1 year increments.

The Asbestos Services section also provides awareness training to FM crafts and personnel, Medical Centers' Hospital Building Management and Design and Construction Groups, Information Technology Services or IES, OEH&S staff and Power Plant engineers. The records are kept at the OEH&S training binder.

G. Respiratory Plan

Respirator Protection is required on every asbestos abatement project. They are submitted along with the medical surveillance report prior to start of asbestos abatement. Clinical and Industrial Hygiene Program staff compiles the reports with the project file and keeps them for 30 years.

H. Quarterly and Annual Waste Reports

Asbestos Services Section compiles these reports for invoicing purposes. The cost of disposal is determined and the project(s) is appropriately billed. The Chemical Waste Section of HMM keeps the reports for 3 years.