SACRAMENTO STATE
Office of Environmental Health & Safety

Asbestos Management Program

Section One

Introduction

1.1 Purpose

The purpose of this program is to detail methods for management of asbestos in building materials at California State University, Sacramento (Sacramento State).

1.2 Policy

It is the policy of Sacramento State that faculty, staff, contractors, and sub-contractors be made aware of the type, quantity, and location of asbestos-containing materials *(ACM)* and/or asbestos-containing construction materials *(ACCM)* in their respective work area(s).

All work that may disturb ACM and/or ACCM shall be performed under the supervision and oversight of campus Environmental Health and Safety (EH&S) or qualified third party Certified Asbestos Consultant (CAC) or Certified Industrial Hygienist (CIH). Prior to performing such work, EH&S or qualified consultant must first evaluate through historical data and/or sampling if ACM and/or ACCM is present to ensure that appropriate precautions are taken.

If it is determined that work will impact ACM, all related activities must be performed by properly trained personnel in accordance with the *"Class of Work"* being performed as defined by Cal-OSHA, and by utilizing the associated *accepted work practices* for that class of work.

Class I and Class II asbestos work at Sacramento State shall be performed by a third-party licensed asbestos abatement contractor.

Special care shall be taken not damage or disturb suspect building materials without prior approval from EH&S. If asbestos-containing materials are intact and in good condition it poses no health risk. When ACM becomes *friable* (able to be crushed, pulverized or reduced to powder by hand pressure), it may present a hazard. EH&S must be notified immediately if damaged ACM or Presumed ACM *(PACM)* is observed.

EH&S maintains and continuously updates an inventory of ACM that is present in campus facilities. Basic reference material is available on the EH&S website but it **IS NEVER** to be considered a complete assessment and EH&S must be consulted.

Sacramento State notifies the campus community of the presence, location and methods of preventing exposure through annual notices provided by EH&S. The notification is provided by e-mail. Additionally, signage is provided at entrances to mechanical spaces where asbestos is known or reasonably assumed to be present. These signs will remain permanently installed until such time that the facility has been renovated to eliminate ACCM. Mechanical rooms include non-public spaces that contain HVAC equipment, hot and/or cold water equipment, electrical, telecommunications, and Custodial closets. Best efforts will also be made to label specific materials known to and not to contain asbestos within these spaces. Hazards are communicated to contractors during job walks, bidding, project kickoff meetings and regularly through construction projects that impact or are in the vicinity of known or potential asbestos containing material.

All current practices in asbestos management will meet or exceed applicable federal, state, and local regulations. Sacramento State voluntarily complies with "state of the art" methods and techniques when engaging in asbestos related work. The Environmental Protection

Agency's "Asbestos Hazard Emergency Response Act" *(AHERA)* regulations specifically apply to schools occupied by students in grades K-12. Sacramento State strives to, at minimum, meet the standards established within AHERA. Laboratory analysis of suspect asbestos-containing materials is conducted by third-party, fully-accredited, environmental testing laboratories.

1.3 Background

Asbestos is a known human carcinogen according to the International Agency for Research on Cancer. Airborne exposures to asbestos have been linked to lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest and abdominal cavity), and asbestosis (a non-cancerous lung disease which causes scarring of the lungs).

The term "asbestos" is a generic term referring to a group of naturally occurring fibrous minerals found in soil, ultramafic, and serpentine rock. Due to its unique properties, asbestos has been used in more than 3,000 construction building products such as insulation, roofing materials, fireproofing, and adhesives. It's high tensile strength, fire retardant, and sound dampening properties have made asbestos a common building material for a variety of applications.

Prior to 1980, asbestos was widely used in construction products such as pipe insulation, vinyl floor tiles, thermal system insulation, spray-on fireproofing for beams and ceilings, roofing felts, coatings and glues, and boiler insulation. Inventories of asbestos-containing building materials and locations are inventoried in the "Notification of Asbestos- Containing Materials" posted on the EHS web page.

California is home to some of the largest deposits of naturally occurring asbestos *(NOA)* in the country. According to the California Department of Public Health (CDPH), 42 of California's 58 counties have NOA deposits, with El Dorado Hills being home to one of the largest known NOA deposits in the world. The United States Geological Survey in conjunction with the California Geological Survey have specifically identified the presence of ultramafic and serpentine rock deposits in neighboring Placer, El Dorado and Amador counties, with serpentine being the California State Rock.

1.4 Scope & Application

The Asbestos Management Program applies to all employees, contractors, and sub-contractors who may impact asbestos-containing materials at Sacramento State facilities.

Examples of items covered by this plan include, but are not limited to the following:

- Campus personnel that may be exposed to asbestos as part of their job function or employment;
- Equipment that is used to remove or control asbestos within campus structures;
- Contractors that abate asbestos-containing materials; and
- Waste haulers and final disposal facilities.

Section Two

Responsibilities

Consistent with campus policy, responsibility for maintaining known ACM in good condition is shared by administrators, managers, building occupants, and any other persons directly or indirectly having the potential to damage or observe damage to suspect materials. Specific responsibilities are described below.

2.1 President and Executive Management

The President of the University has overall responsibility to ensure the campus is in compliance with asbestos related requirements and delegates authority to the Vice President of Administration and Business Affairs to implement the necessary programs. The Vice President for Administration and Business Affairs supports the Associate Vice President for Facilities Management, Associate Vice President of Risk Management Services, and the Director of Environmental Health & Safety to develop and maintain the Asbestos Management program.

The Associate Vice President for Facilities Management has responsibilities that include ensuring the necessary support and resources to manage the existing asbestos materials in place until such time that it becomes feasible through remodel, renovation, or demolition to remove all asbestos material within the scope of the identified project. This can only be accomplished through extensive coordination with Risk Management and Environmental Health & Safety.

The Associate Vice President for Risk Management Services has responsibility for the Environmental Health & Safety (EH&S) Department and as such provides the necessary support and resources as EH&S requires to ensure the proper, maintenance, handling, and removal of asbestos through program development, training, and consultation to affected departments and areas.

2.2 Asbestos Program Manager

The Director of EH&S is the Program Manager and has the following responsibilities:

1. Establish a written program that includes assessment, inspection, operations and maintenance, communications, and other aspects included within this document.
2. Conduct other activities within the program as necessary including assigning responsibilities related to training, logistics, records, and medical monitoring records.

2.3 Asbestos Program Specialist

The EH&S Occupational Safety Specialist is the Program Specialist and has the following responsibilities:

1. Conduct inspections as follows:
    - identify and characterize the existence, location, type, and estimated quantity of asbestos as needed;
    - Arrange for third-party laboratory analysis of asbestos samples collected during inspection(s)
    - Interpret, report, and communicate results as necessary;
    - Conduct periodic training of Facilities employees to perform periodic inspections of known ACM to evaluate condition and potential for damage.
2. Arranging for waste collection and disposal. Comprehensive recordkeeping as follows:
    - Locations, quantity, and type of asbestos, including where it has been removed and where it is being managed in-place as an interim control.
    - Inspection schedules, results and follow up actions.
3. Review of operations being conducted and maintain, conduct, or coordinate current exposure assessment documentation for asbestos-related tasks.

2.4 Trained Facilities Personnel

1. Campus personnel that regularly may come in to contact, but do not disturb, asbestos-containing materials shall receive annual asbestos awareness training. Examples include: Facilities Trades, Custodial, Information Technology Employees, etc.

2. Team 900 employees – a small group of Facilities Management employees who receive initial 40-hour Asbestos Contractor/Supervisor training and annual refresher. These employees perform small scale asbestos-related work limited to <100 square feet or one glove bag.

2.5 Hazardous Materials Consultants

Third-party consultants provide inspection services, abatement oversight, exposure monitoring, and related laboratory services for large removal jobs on campus. Services are provided on an as needed, as requested, project-specific basis; each varying in scope and duration. All consultants must be a Cal-OSHA Certified Asbestos Consultant (CAC) or Certified Site Surveillance Technician (CSST) working under the direction of a CAC.

2.6 Asbestos Abatement Contractors

Sacramento State retains the services of asbestos abatement contractors to provide all transportation, materials, equipment, personnel, and other means necessary to remove asbestos at identified sites in accordance with the specifications and performance standards identified in the contract agreement. Abatement contractors have resources and expertise necessary to carry out asbestos removal in full compliance with applicable regulations including the Sacramento Metropolitan Air Quality Management District (SMAQMD), California Department of Toxic Substances Control (DTSC), the Environmental Protection Agency (EPA), and the California Occupational Health & Safety Administration (Cal-OSHA).

Asbestos abatement contractors agree to have all work monitored and inspected by campus and/or a third-party consultant selected by Sacramento State. Activities to be monitored may include, but are not limited to: sufficiency of containment; personnel work practices, visual

final clearance, and/or final air clearance sampling prior to re-occupancy.

Contracted consultants and Sacramento State representatives have access to any location of the asbestos job site at any time for the duration of the contract. Any deficiencies noted by the asbestos consultant or Sacramento State during work operations shall be immediately corrected.

The asbestos abatement contractor is responsible for timely submittal of the appropriate regulatory notifications for each abatement project as applicable. Copies of the notifications are provided to the Asbestos Program Manager prior to commencement of work.

2.7 Non-Hazardous Materials Contractors

Non-hazardous materials contractors will be informed of inspection results and any materials that were or will require removal by abatement contractors as well as those in the general work area. Non-Hazardous material contractors will ensure their activities do not impact known or suspected ACM and will communicate any issues or concerns promptly to the Sacramento State Project Manager who will contact EH&S.

The methods of communication by Sacramento State shall include, but not be limited to the following:

- Provide complete information of the presence and location of known or suspect asbestos containing material within the specific work area to be impacted as well as the general work area. This may be a third party report or sample reports.
- Include information and in bid documents and job walks to perspective contractors.
- Once agreement is finalized and prior to the initiation of any destructive site work a project or construction kick-off meeting will be held where the presence, location and methods to control any hazards will be reiterated.

Section Three

Regulatory Requirements

3.1 California Occupational Health & Safety Administration (Cal-OSHA)

Cal-OSHA administers a number of regulations that are aimed at limiting exposure to airborne asbestos fibers in the workplace. Applicable California Code of Regulations (CCR) for Sacramento State include California's Asbestos in Construction Standard (8 CCR Section 1529), General Industry (8 CCR Section 5208), and 8 CCR 3204.

The OSHA construction standard establishes four categories of asbestos work.

Class I asbestos work includes activities involving the removal of thermal system insulation (TSI) and surfacing asbestos containing material (ACM) or presumed asbestos-containing material (PACM). (In general, this involves work on friable materials.)

Class II asbestos work includes activities involving the removal of asbestos containing material (ACM) that is not TSI or surfacing material. This includes, but is not limited to, the removal of asbestos containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics. (In general, this involves work on non-friable materials; more stringent controls are required if the material is friable (“non-intact”) or becomes friable during the course of the work.)

Class III asbestos work includes repair and maintenance operations where ACM, including TSI and surfacing ACM and PACM may be disturbed. In general, this is O&M work that generates no more than a single disposal bag of waste.

Class IV asbestos work includes maintenance and custodial activities during which employees contact, but do not disturb, ACM or PACM, and activities to clean up dust, waste, and debris resulting from Class I, II, and III activities. Workers should wear respirators if cleaning up a regulated area where respirators are required. Awareness training is required at a minimum. In practice, a worker cleaning up in an asbestos area should have the same training as other workers in the area.

3.2 Department of Toxic Substances Control (DTSC)

The California DTSC regulates the generation, transportation, and disposal of asbestos waste. Quantities of asbestos waste greater than 50 pounds requires the use of a registered hazardous waste transporter, use of hazardous waste manifest and disposal at permitted disposal facility. Asbestos waste is classified as a hazardous waste by DTSC if it is friable and contains greater that 1% asbestos. A friable waste is one that can be reduced to powder or dust under hand pressure when dry. The United States Environmental Protection Agency (U.S. EPA) does not regulate asbestos as hazardous waste under the Resource Conservation and Recovery Act (RCRA), it is considered to be a “non-RCRA,” or “California-only” hazardous waste. DTSC considers non-friable bulk asbestos-containing waste to be non-hazardous regardless of its asbestos content, so it is not subject to regulation under Title 22, Division 4.5, of the California Code of Regulations.

You may not mix different hazardous wastes in one container during transportation.

The EPA established a national system for tracking hazardous waste shipments electronically. This system, known as “e-Manifest,” modernized the nation’s cradle-to-grave hazardous waste tracking process. EPA launched e-Manifest on June 30, 2018.

EPA established the e-Manifest system according to the Hazardous Waste Electronic Manifest Establishment Act , enacted into law on October 5, 2012. The “e-Manifest Act” authorizes the EPA to implement a national electronic manifest system and required that the costs of developing and operating the new e-Manifest system be recovered from user fees charged to those who use hazardous waste manifests to track off-site shipments of their wastes.

Key features of the Hazardous Waste Electronic Manifest Establishment Act:

- e-Manifest extends to all federally and state-regulated wastes requiring manifests.
- EPA encourages the use of electronic submittals, though the statute allows optional use of paper manifests. and authorizes central collection of data from electronic and paper manifests.
- EPA is authorized to collect reasonable user fees for all system related costs including development and maintenance.
- EPA must conduct annual Inspector General audits and submit biennial reports to Congress.
- EPA must establish a uniform effective date in all states for e-Manifest and must implement e-Manifest until states are authorized.

3.3 Sacramento Metropolitan Air Quality Management District (SMAQMD)

The Sacramento Metropolitan Air Quality Management District regulates the demolition and renovation of buildings and structures that may contain asbestos. The provisions that cover

these operations are found in Rule 902.

Because asbestos has been used extensively in residential, commercial and industrial construction, Rule 902 requires that for every renovation or cumulatively over a year involving the aggregate removal of 100 square feet or 100 linear feet or greater of Regulated Asbestos-containing Material (RACM), and for every demolition where a load-bearing structural member will be removed (even when no asbestos is present), a notification must be made to the SMAQMD at least 10 working days (except in special circumstances) prior to commencement of demolition/renovation. When removing any Regulated Asbestos-Containing Material, District regulations must always be followed. SMAQMD implements EPA's National Emission Standard for Hazardous Air Pollutants (NESHAP).

3.4 Environmental Protection Agency

California implements a regulatory program for all aspects of asbestos management. Elements of federal EPA's Asbestos Hazard Emergency Response Act (AHERA) and Asbestos School Hazard Abatement Reauthorization Act (ASHARA) and numerous technical publications are incorporated by reference into many California regulations. EPA authorizes training providers for asbestos workers and consultants.

Section Four

Inspection and Identification

4.1 Inspection

1. Similar to inspections required in AHERA regulations, inspections will be conducted, every three years to assess the condition of known ACM in occupied areas, or when a deteriorated ACM has been specifically identified.
2. Existing inspection records and sampling results shall be reviewed prior to an inspection for purposes of verifying that previously identified ACM has not become an asbestos hazard and to prevent unnecessary sampling and laboratory analysis of suspect material. The focus of inspections is to minimize the potential for releases of asbestos fibers inside campus facilities
3. National Emission Standard for Hazardous Air Pollutants (NESHAP) inspections are conducted in accordance with Sacramento Metropolitan Air Quality Management District (SMAQMD) regulations. These inspections are performed prior to renovation involving the disturbance of 100 square feet or 100 lineal feet or greater of RACM and/or demolition. SMAQMD notification must be made at least 10 working days prior to commencement of renovation or demolition activities. The focus of NESHAP inspections is to prevent releases of RACM into ambient air.

4.2 Conducting Inspections

1. Visually inspect ACM, ACCM, PACM or RACM to verify that the material is intact and in good condition or document otherwise.
2. Sample all suspect ACM not previously identified as necessary or applicable. Identify all friable suspect RACM and all non-friable suspect RACM that was not previously identified.
3. Collect bulk samples of suspect ACM that has not been previously sampled.

4.3 Conducting Bulk Sampling

As a component of the campus Asbestos Management Plan, the University samples and catalogs PACM for purposes of identifying the presence of ACM and/or ACCM. All sampling will be conducted using the AHERA 3, 5, 7 protocol.

For spray or trowel applied surfacing materials such as fireproofing, acoustical ceiling texture, plaster, wall texture on drywall, and stucco, the affected facility or portion thereof shall be thoroughly surveyed. The surveyor must, at a minimum, collect three samples for less than 1,0000 square feet, five samples for 1,000-5,000 square feet, and seven for greater than 5,000 square feet for each homogeneous material. More than 3, 5, 7 may be required in certain situations to adequately test for the presence of asbestos. Miscellaneous materials are any material that is not surfacing, or thermal system insulation must be sampled sufficiently to determine. This typically constitutes more than one sample per homogeneous material.

According to the regulations, the survey shall be performed by a person who has taken the EPA approved Building Inspector course and must comply with the procedures outlined in the course.

4.4 Laboratory Analysis

Bulk samples must be analyzed by a third-party laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) using polarized light microscopy (PLM) with dispersion staining.

The lower limit of reliable quantification for asbestos using the PLM method is approximately one percent (1%) by volume. In instances where a material is found to have low concentrations of asbestos, a second analysis can be performed. Unlike the PLM method, the Point Count 400 method of analysis can reliably determine if a material contains less than 1% asbestos. The advantage of establishing if a material contains less than 1% asbestos is that it will no longer be considered an Asbestos- containing Material (ACM) by the EPA. If the material is not an ACM then it will not be subject to the requirements of the EPA, such as being removed prior to demolition or being disposed of as a hazardous material.

4.5 Sample Results

For small scale, day-to-day tasks, if asbestos content is at a detectable level, the material will be treated as ACM and safe work practices are required.

For large scale projects involving abatement or demolition, sample results above detectable levels but less than 1% will be re-analyzed by the point count method.

An area of homogeneous material may be considered ACM without analyzing any remaining samples if one bulk sample analysis shows greater than 1% asbestos.

Non-ACM materials may still be regulated by Cal-OSHA as an Asbestos-Containing Construction Material (ACCM). ACCM is defined as a material that contains greater than 0.1% asbestos by weight.

4.6 Sample Documentation

Each sample collected shall be immediately placed in a sealed leak tight container, numbered both sequentially and with an identification number unique to the sampling area and the facility, dated, and identified by the initials of the asbestos inspector taking the sample.

The location where each sample is taken shall be noted by sample number on a sample location drawing or by use of photographs clearly indicating the location of samples taken.

The following sample records shall be made and maintained at the EHS Office:

- Inspection records, including maps, diagrams, and lab reports. The asbestos inspection database includes the type of material, material description, and a description of the sample location.
- Chain of custody forms identifying where each sample was taken.

Section Five

Operations & Maintenance (O&M) Program

5.1 Training

Facilities Management employees may perform Class III repair and maintenance that disturbs ACM or PACM. Class III allows for the disturbance of small quantities of asbestos-containing materials if it is in the course of regular maintenance activity. The Maintenance Mechanic classification is primarily tasked with this work due to the type and location of material and the responsibilities within their classification. All personnel must consult with the Asbestos Program Specialist to determine the presence of asbestos in building materials if uncertain about any material or task.

All employees engaged in Class III work receive Cal/OSHA Asbestos Worker Initial training and annual refresher training.

5.2 Equipment

Asbestos O&M trained staff utilizes a variety of equipment to conduct O&M operations, including HEPA vacuums, sprayers, mini-containments, bags, and polyethylene sheeting. HEPA vacuums are managed by the asbestos abatement team. Primary maintenance is emptying collected material and properly disposing, which is done under careful control by EH&S due to the assumed hazardous content.
EHS may arrange for periodic DOP testing of HEPA vacuums as deemed necessary.

5.3 Medical Surveillance

Employees who, for a combined total of 30 or more days per year, are engaged in Class III work or are exposed at or above the permissible exposure limit (PEL) are included in the medical surveillance program for asbestos. Any day in which an asbestos worker engages in Class III operations on intact material for one hour or less (taking into account the entire time spent on the removal operation, including cleanup) and, while doing so, adheres fully to the work practices specified in this standard, shall not be subject to medical surveillance requirements. The time invested in asbestos work is tracked in the work control program and must be documented by each employee conducting Class III work.

5.4 Personal Protective Equipment (PPE)

Asbestos Operations & Maintenance workers are provided with personal protective equipment suited to the particular operation. The scope of work, nature of the asbestos materials being disturbed, and past exposure data all determine the types of personal protective equipment necessary. Wet removal methods virtually eliminate the generation of respirable dust on many removals resulting in a Negative Exposure Assessment for that operation. Employees are encouraged to wear respirators and have the option to use any personal protective equipment reasonable for the given task and assessed hazard.

PPE for asbestos operations includes nitrile gloves, Tyvek coveralls, Air purifying negative pressure respirators equipped with HEPA cartridges, and eye protection. All employees are required to participate in the respiratory protection program, including medical clearance and fit testing prior to using respirators. Disposable respirators may not be used during activities that disturb asbestos.

5.5 Work Practices

Work and Decontamination procedures involve a person in the work area on the plastic sheet and one off the sheet. The person on the sheet carries out the work and never leaves the sheet until the work is complete and dry decontamination procedures are completed. The person off the sheet supplies materials to and accepts material from the on-sheet person. The off-sheet person never enters the Work Area. If the work involves more than one person, then the team shall consist of two (or more) on-sheet person and one off-sheet person.

Do not eat, drink, smoke, chew gum or tobacco, or apply cosmetics in the Work Area. To eat, drink, chew, or smoke, workers shall follow the procedures described below and leave the Work Area.

Provide worker protection as required by the most stringent OSHA and/or EPA standards applicable to the work. The following procedures are minimums to be adhered to regardless of fiber count in the Work Area.

Disturbance of ACM During O&M Work when there is a Negative Exposure Assessment in place:

If work is on non-TSI or non-surfacing material and there is a negative exposure assessment, then a respirator is not required). Engineering controls and work practices, wet methods, local exhaust ventilation should be established and used during removal. Asbestos-containing debris and waste from construction activities (including O&M) are to be promptly cleaned up and disposed of in leak-tight containers. Asbestos removal must be cleaned up with wet methods and HEPA vacuums. The construction standard requires that in areas with accessible, friable TSI and surfacing material, waste or debris must be presumed to contain asbestos.

Airborne fiber levels generated during work need to be less than 0.01 f/cc. This requirement is necessary to ensure that the building is not contaminated by the O&M work.

Disturbance of ACM where PEL may be exceeded:

This work may include disturbance that involves chipping, breaking, sawing of TSI or

surfacing materials.

A mini-enclosure, glovebags and/or other enclosures must be constructed for these types of activities. Employees must have a minimum of 16 hours O&M training or 40-hour supervisor training, respirators, engineering controls and work practices, wet methods, local exhaust ventilation, prompt clean-up of debris, and waste disposal in leak tight containers.

Removal of small amounts of ACM

a. Use the following procedures to remove a small amount of ACM as part of repair or maintenance operations. Use of this procedure is limited to situations where the amount of waste generated is not greater in size than the OSHA limit on Class III work (operation will generate no more waste than will fit into one 60 inch by 60-inch glovebag or disposal bag).

b. Prepare work area with drop cloth creating a regulated area.

c. If access above ceiling is required, obtain access using procedures of Section 01028 “Entry into Controlled Areas.” Place tools, equipment and materials needed onto drop cloth.

d. Install polyethylene drop sheet or a pan immediately below location of work to catch any falling debris.

e. Adequately wet area where hole is to be drilled. Wet ACM sufficiently. Allow amended water to soak into material so that ACM is wetted through to substrate in spot where ACM it to be removed.The primary tools for asbestos operations and maintenance (Class III) work are HEPA vacuums, amended water, polyethylene sheeting, and minimal friction hand tools to remove asbestos components. A typical Class III job involves laying out plastic underneath the work area, repeatedly spraying amended water on the asbestos components as they are removed with hand tools, then folding up the plastic with the wetted asbestos and placing in a plastic bag. A HEPA vacuum may be deployed to capture any materials left behind.

HEPA vacuums can be used with specialized tools to capture dust generated during cutting or drilling operations in conjunction with wet methods.

Section Six

Training and Communications

6.1 Annual Asbestos Notice

EHS updates the annual asbestos notification to campus employees including any newly identified asbestos-containing materials. The list shows that asbestos is found in similar applications across all buildings containing asbestos. The list remains representative as it is not feasible to test all materials at all locations. It should be assumed that all materials in identified buildings contain asbestos until proven otherwise. The EHS Director signs the notification annually and notifies the campus community via email. The most current notification is displayed on the EHS web page.

6.2 Contractor Notice

Campus provides the Notification of Asbestos-containing Materials to contractors prior to demolition or renovation in impacted buildings prior to bid and at the job start meeting as outlined in Section 2.6 and 2.7.

6.3 General Training

In addition to the training described in Section 2.4, EHS provides introductory asbestos presentations to employees as part of the EHS Safety Seminar and on an as requested basis.

6.4 IT, Custodian Training

In addition to the training described in Section 2.4, EHS provides Class IV training to employees on an annual basis.

6.5 O&M Training

In addition to the training described in Section 2.4, EHS provides awareness training to employees on an as needed basis.

Section Seven

Recordkeeping

7.1 Exposure Assessments

EHS conducts or arranges for exposure assessments for necessary activities as identified. These records include a detailed description of the activities conducted including, but not limited to, controls used, PPE employed for the assessment and what is determined necessary based on the results of the assessment, calibration sheets and laboratory results showing asbestos exposure for each work activity. Laboratory analytical methods include Phase Contrast Microscopy (PCM) and/or Transmission Electron Microscopy (TEM).

7.2 HEPA Testing

EHS maintains copies of Dispersed Oil Particulate (DOP) testing for each HEPA vacuum that is DOP tested. DOP testing is performed as deemed necessary on each device or any time damage is suspected.

7.3 Hazardous Waste

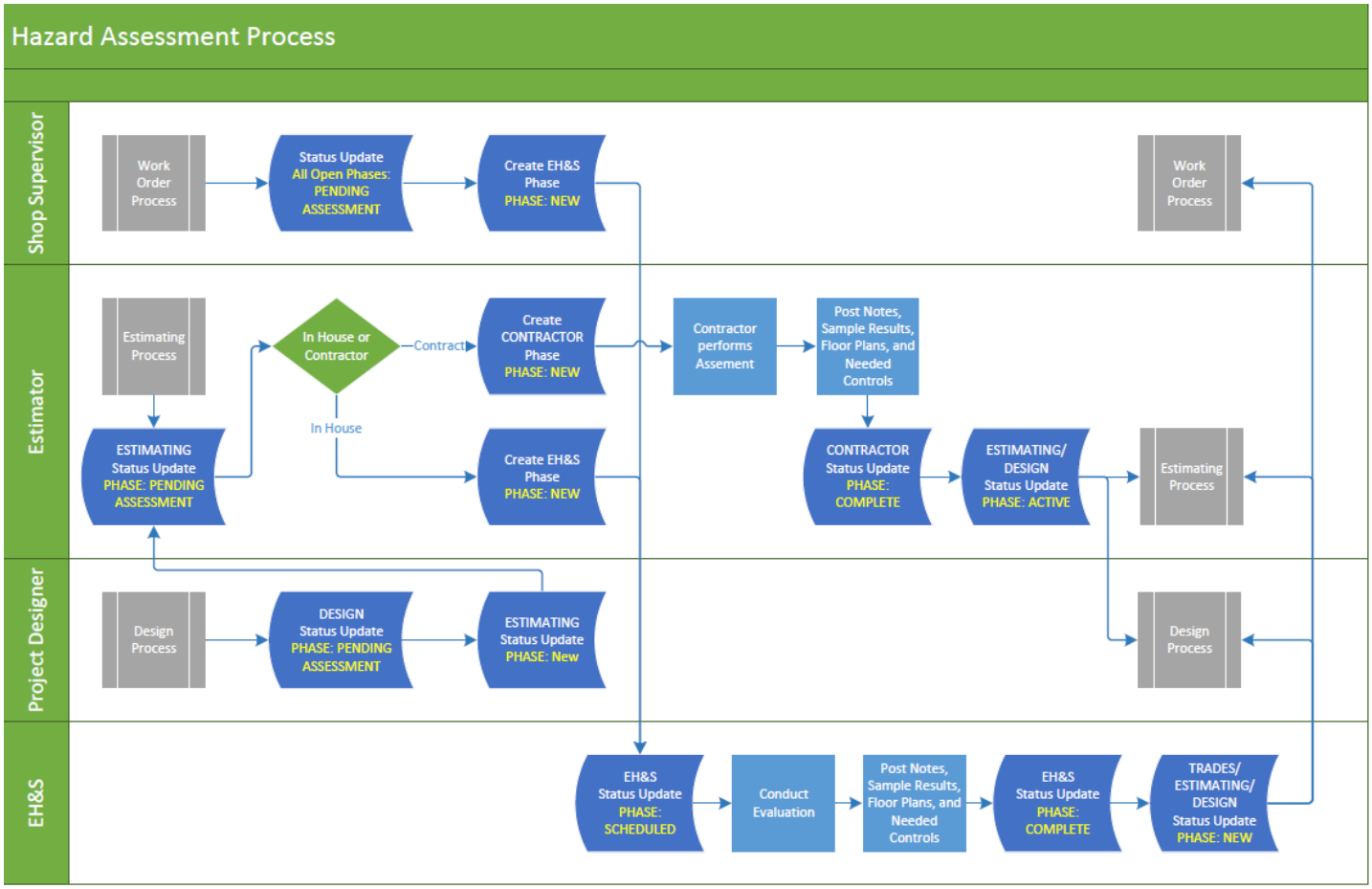
EHS arranges for disposal of asbestos waste generated at campus facilities and maintains copies of hazardous waste manifests demonstrating proper disposal of asbestos waste per DTSC regulation

Appendix A

Work Flow

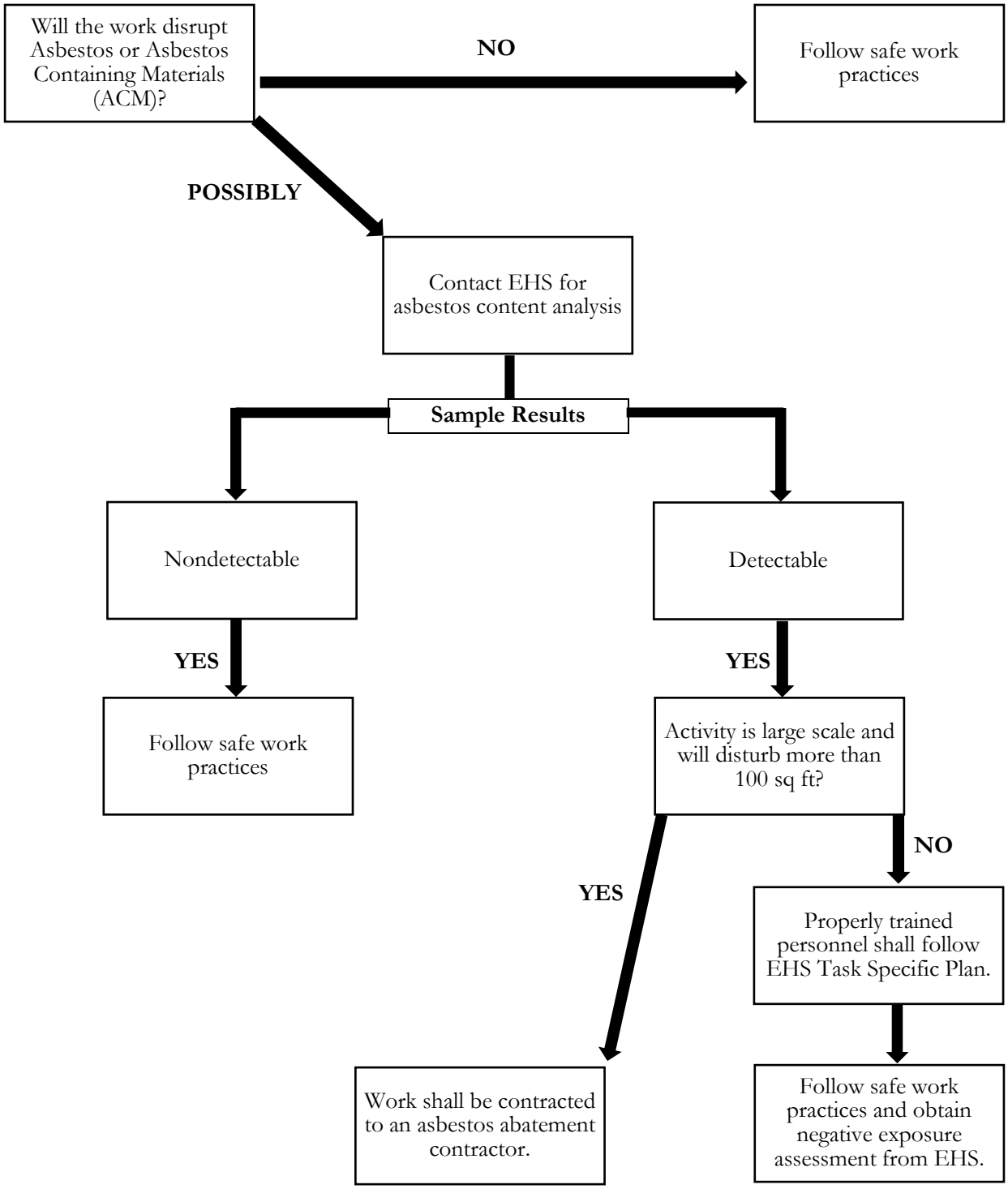
Facilities Management has primary responsibility for managing asbestos materials in place. The flow chart and supplemental information that follows is the primary decision process that Facilities managers follow prior to initiating any renovation or construction project.

Asbestos Work Flowchart



Asbestos Management

Renovation, Repair and Maintenance Process Flow



Appendix B

Exposure Monitoring

Facilities' employees who perform asbestos-related maintenance activities are periodically monitored for potential asbestos exposures when performing work. Most of the asbestos exposure data resulting from these small, controlled, and short duration tasks fall below Cal-OSHA's permissible exposure limits of 1.0 fiber per cubic centimeter Short Term Exposure Limit (Excursion Limit) and 8-hour Time Weighted Average of 0.1 fiber per cubic centimeter.
Where it can be demonstrated with proper sampling technique and laboratory data that exposures for a specific task fall below Cal-OSHA's exposure limits, the same work can proceed under a Negative Exposure Assessment (NEA). NEA rules allow the same work under the same conditions and applying the same removal methods to be performed without additional exposure monitoring.

The Asbestos Abatement Contractor for Sacramento State is periodically subject to asbestos air monitoring by Environmental Health & Safety personnel. These include area, perimeter, clearance, and personal exposure monitoring.

All exposure monitoring data is maintained in the EHS office.