California Institute of Technology

ASBESTOS MANAGEMENT PROGRAM

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2024
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INTRODUCTION

The Caltech asbestos management program has been developed to ensure that all work involving asbestos-containing materials (ACM) is controlled to reduce the potential for personnel exposure to airborne asbestos fibers and area contamination. The Caltech Asbestos Management Plan will remain in effect until all sources of asbestos have been identified and removed from all campus facilities. The following sections provide additional information on the process work plans.

SCOPE

The Caltech Asbestos Management plan applies to all demolition, renovation, and repair activities that might directly or indirectly disturb identified asbestos-containing materials (ACM) on the Caltech campus or affiliated offsites managed directly by Caltech. Projects involving the disruption of ACMs are categorized as “asbestos projects.” Asbestos projects require planning and coordination between EH&S and Facilities operations group(s). The coordination of efforts ensures that ACMs are properly identified and managed before any planned work is likely to disturb them. The Facilities operational groups are identified as follows:

- Planning, Design and Construction (PD&C)
- Facilities Shops
- Facilities Operations
- Faculty Housing

ROLES AND RESPONSIBILITIES

ENVIRONMENTAL HEALTH AND SAFETY

The role of the EH&S Office is to provide oversight for all campus asbestos projects. Under the supervision of the Senior Director of EH&S, the campus Environmental Programs Manager will interact with the various project stakeholders to ensure that the established asbestos process is followed, and all project results are documented. In addition to providing campus oversight, the EH&S Office is responsible for publishing annually the campus-wide asbestos notification, as mandated by the California Health and Safety Code Section 25915.

1. Asbestos Project Oversight

Several EH&S staff members are trained and certified as Asbestos Building Inspectors (ABIs) by a certified Cal/OSHA-approved training provider. EH&S activities may include:

- incidental collection of bulk samples of suspected or presumed asbestos-containing materials (PACM). Collected samples are sent for laboratory testing by a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NVLAP) for analysis.
- compiling asbestos sampling documentation and sample results into a project summary report.
- maintenance of Caltech’s Online Asbestos Archive
- providing technical assistance for Facilities Operations groups and PD&C with planning and coordinating asbestos-related projects.
• coordinating with Facilities Operations groups to ensure asbestos-related projects are staffed with certified asbestos contractors.
• signing off on hazardous waste manifests.
• filing hazardous waste manifests in a central repository.
• responding to SCAQMD inspections and/or document requests related to asbestos projects, when applicable.

2. Asbestos Annual Notification
Caltech annually notifies all employees about asbestos-containing building materials on campus, Appendix I.

Asbestos warning signs or labels are required to be posted at the entrances to mechanical rooms/areas that contain thermal system insulation and surfacing ACM and PACM

3. Coordinate Facilities Training
The Caltech EH&S Office is responsible for coordinating asbestos Operation and Maintenance (O&M) training for all Facilities stakeholders. As part of this task, EH&S will monitor and maintain training files for all identified Facilities staff members of the Caltech Operations and Maintenance team. Training coordination includes:
• selecting a certified asbestos trainer
• maintaining training records
• scheduling onsite training for all Facilities staff
• inputting asbestos training certifications into Caltech’s centralized training tracking platform.

FACILITIES: PLANNING DESIGN AND CONSTRUCTION
The Planning Design and Construction (PD&C) team is tasked with capital construction and renovation projects across the Caltech main campus and Caltech affiliated sites. These projects may actively or inactively disturb ACM building materials as part of any planned work.

Caltech PD&C is responsible for the following:
1. Project coordination with the EH&S Office for all projects that may disturb or release ACM from building materials.
2. Contracting a Certified Asbestos Consultant party who can provide a pre-renovation or pre-demolition hazardous materials survey of the project area to identify all potential sources of asbestos that might be disturbed as part of planned projects.
3. Ensure that collected samples are sent to a laboratory that is certified under (NVLAP).
4. Contract a certified asbestos contractor who can abate or repair existing asbestos-containing material.
5. Ensure that selected asbestos abatement contractor(s) are current with all required asbestos certifications.
6. Coordinate advance notification to regulatory agencies:
   a. South Coast Air Quality Management District (SCAQMD) - Notification for Demolition and Removal Documents
   b. California Occupational Safety Health Administration (Cal/OSHA) Asbestos Notification form.
7. Coordinate with the Caltech EH&S Office to implement the contractor work plans and safe work requirements.
8. Ensure a post-abatement air clearance sampling prior to releasing the workspace.
9. Coordinate between the Caltech EH&S Office and selected asbestos abatement contractor the selection of the hazardous waste disposal site and hazardous waste manifest signature.
10. Provide all requested documents to EH&S to ensure the project close-out summary form is completed.

**FACILITIES: OPERATIONS, HOUSING, AND SHOPS**

Facilities Operations, Faculty Housing, and Facilities Shops have key employees trained and certified by an outside Cal/OSHA-approved training provider to the initial 16-hour and annual 4-hour Class III Asbestos Operations and Maintenance (O&M) level. This certification permits certified employees to work safely with asbestos-containing materials while performing small-scale maintenance and repair work. O&M-certified employees must enroll in the Caltech Respiratory Protection Program and are medically evaluated, trained, and fit-tested to wear respiratory protection annually.

The O&M certification allows Facilities to conduct small-scale repair and maintenance of asbestos-containing building materials to access non-asbestos components. The specific limits of the O&M projects are as follows:

- No Class I level work - direct abatement of friable thermal system insulation or surfacing ACM/PACM
- No Class II level work - abatement of thermal system insulation or surfacing materials containing asbestos
- The O&M project must be less than 100 square feet in total area, or the ACM being removed is no greater than the amount that can be contained in one standard-size glove bag, which shall not exceed 60 inches in length or width

Projects that exceed the O&M thresholds are to be contracted out. Facilities Operations and Shops are responsible for selecting, managing, and overseeing the work of third-party certified asbestos contractors when performing asbestos-related projects on the Caltech campus.

These duties are as follows:

1. Project coordination with the EH&S Office for all projects that may disturb or release ACM from building materials.
2. Contracting a Certified Asbestos Consultant party who can provide a pre-renovation or pre-demolition hazardous materials survey of the project area to identify all potential sources of asbestos that might be disturbed as part of planned projects.
   a. Ensure that collected samples are sent to a laboratory that is certified under (NVLAP).
3. Contract a certified asbestos contractor who can abate or repair existing asbestos-containing material.
   a. Ensure that selected asbestos abatement contractor(s) are current with all required asbestos certifications.
4. Coordinate advance notification to regulatory agencies.
a. South Coast Air Quality Management District (SCAQMD) – Notification for Demolition and Removal Documents  
b. California Occupational Safety Health Administration (Cal/OSHA) Asbestos Notification form

5. Coordinate between the Caltech EH&S Office to implement the contractor work plans and safe work requirements.
6. Ensure a post-abatement air clearance sampling prior to releasing the workspace.
7. Coordinate between the Caltech EH&S Office and selected asbestos abatement contractor the selection of the hazardous waste disposal site and hazardous waste manifest signature.
8. Provide all requested documents to EH&S to ensure the project close-out summary form is completed.

Facilities staff who may potentially interact or come into contact with ACM or PACM building materials are provided with asbestos general awareness training via Caltech’s MyLearn system. General awareness training is provided annually. The Facilities Training Matrix identifies all Facilities shops required to complete the annual general awareness training.

ASBESTOS PROCESS FLOW

The EH&S Office has established an asbestos process flow to ensure proper management ACM. The following procedures are to be implemented whenever there is a possibility that ACMs are to be disturbed during any of the following activities:

- Demolition
- Construction/Renovation
- Utility Installation
- Repair
- Maintenance

The asbestos process flow is categorized into two parts:

1. Project scope check – determines if the planned project area contains ACM. Information about the presence of ACM is confirmed via existing sampling records and new area asbestos sampling if there are no previous sampling records.
2. Asbestos project protocols – If ACM is determined to be present in the planned project area, the project is categorized as an asbestos project. Asbestos projects are required to follow the asbestos project procedures.
### Part I: Project Scope Check (See Appendix II)

<table>
<thead>
<tr>
<th>Procedures</th>
<th>Available Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Determine project scope:</td>
<td></td>
</tr>
<tr>
<td>a. Is the building identified as potentially containing asbestos or built pre-1980?</td>
<td>Appendix I: List of Caltech buildings built prior to 1980.</td>
</tr>
<tr>
<td>b. Will planned work disturb existing building materials?</td>
<td></td>
</tr>
<tr>
<td>2. Are there existing asbestos surveys for the planned work that can be used to determine the presence of asbestos?</td>
<td>BOX Drive – Campus Asbestos Survey Archive</td>
</tr>
<tr>
<td>3. If existing records exist:</td>
<td></td>
</tr>
<tr>
<td>a. Past sampling records confirm no ACM in planned work area: the project can proceed without further testing.</td>
<td>Appendix II - Asbestos Process Flow</td>
</tr>
<tr>
<td>b. If the previous sampling record confirms asbestos in the work area and planned work is greater than &gt;100 square feet: the project is classified as an asbestos project.</td>
<td></td>
</tr>
<tr>
<td>4. If there are no existing sampling records for the planned work area, a certified asbestos consultant must be contracted to perform an area survey before the start of work.</td>
<td></td>
</tr>
<tr>
<td>5. New asbestos survey sample results:</td>
<td></td>
</tr>
<tr>
<td>a. Asbestos survey results return as a “none-detected” – the project can proceed as-is.</td>
<td>Appendix: III – Asbestos Project Procedures</td>
</tr>
<tr>
<td>b. Asbestos survey results come back positive for ACM: the project is considered an asbestos project. Follow the asbestos project process.</td>
<td></td>
</tr>
</tbody>
</table>
## Part II: Asbestos Procedure for Projects > 100 square feet of ACM

<table>
<thead>
<tr>
<th>Procedures:</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Select only certified asbestos abatement contractor(s) and consultants. Collect the following documents:</td>
<td>An asbestos contractor cannot perform dual roles of asbestos testing/survey and material abatement.</td>
</tr>
<tr>
<td>a) Certified Abatement Company</td>
<td></td>
</tr>
<tr>
<td>i. Asbestos Supervisor Certification</td>
<td></td>
</tr>
<tr>
<td>ii. Asbestos Worker Certification</td>
<td></td>
</tr>
<tr>
<td>b) Certified Asbestos Consultant</td>
<td></td>
</tr>
<tr>
<td>i. Certified Asbestos Consultant (CAC) Certification</td>
<td></td>
</tr>
<tr>
<td>c) Certified Site Surveillance Technician (CSST)</td>
<td></td>
</tr>
<tr>
<td>2. Selected contractor to provide project-specific work plan</td>
<td>EH&amp;S can assist in reviewing site-specific work plans.</td>
</tr>
<tr>
<td>a) Area protection – (doors, windows, and airlock)</td>
<td></td>
</tr>
<tr>
<td>b) Asbestos signage around the work area</td>
<td></td>
</tr>
<tr>
<td>c) Ventilation – HEPA ventilation in and out of worksite</td>
<td></td>
</tr>
<tr>
<td>d) Project clearance sampling must be conducted by a certified Asbestos Consultant</td>
<td></td>
</tr>
<tr>
<td>3. Area notification – notification will be provided using Caltech’s Service Interruption Notice at least seven days prior to start of work.</td>
<td></td>
</tr>
<tr>
<td>4. Project Monitoring – the project manager monitors and supervises abatement contractors are required to adhere to the approved workplan.</td>
<td>EH&amp;S can assist with technical and safety related concerns.</td>
</tr>
<tr>
<td>5. Post Abatement clearance sampling is required to release a project workspace.</td>
<td></td>
</tr>
<tr>
<td>6. EH&amp;S will sign off on any hazardous waste manifest(s).</td>
<td></td>
</tr>
<tr>
<td>7. The project manager will collect all information required to complete the Asbestos Project Summary Form.</td>
<td>Appendix VII</td>
</tr>
<tr>
<td>8. EH&amp;S will update the BOX cloud drive and include summary documents for each completed project.</td>
<td>BOX Cloud Drive</td>
</tr>
</tbody>
</table>
APPENDIX I: CALTECH BUILDINGS BUILT PRIOR TO 1980
Thermal system insulation (TSI) and surfacing materials installed before 1980 must be identified as Presumed Asbestos-Containing Materials (PACM) until bulk testing of suspected materials proves otherwise.

Below is a list of those Caltech buildings built before 1980. This list is intended as a guide for campus buildings that may contain asbestos. Suspected materials found in buildings not on this list should still be tested to determine if the materials contain asbestos.

<table>
<thead>
<tr>
<th>Campus Buildings</th>
<th>Caltech Housing Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alles Laboratory</td>
<td>Keith Spalding</td>
</tr>
<tr>
<td>Alumni House</td>
<td>Kellogg Laboratory</td>
</tr>
<tr>
<td>Arms Laboratory</td>
<td>Kerckhoff Laboratory</td>
</tr>
<tr>
<td>Athenaeum</td>
<td>Lauritsen Laboratory</td>
</tr>
<tr>
<td>Baxter Hall</td>
<td>Lloyd House</td>
</tr>
<tr>
<td>Beckman Auditorium</td>
<td>Marks House</td>
</tr>
<tr>
<td>Beckman Behavioral Biology</td>
<td>Caltech Hall</td>
</tr>
<tr>
<td>Blacker House</td>
<td>Mudd Laboratory, North</td>
</tr>
<tr>
<td>Braun House</td>
<td>Mudd Laboratory, South</td>
</tr>
<tr>
<td>Bridge (East, West, Annex)</td>
<td>Noyes Laboratory</td>
</tr>
<tr>
<td>Brown Gymnasium</td>
<td>Page House</td>
</tr>
<tr>
<td>Browne Dining Hall</td>
<td>Parsons-Gates</td>
</tr>
<tr>
<td>Center for Student Services</td>
<td>Powell-Booth Laboratory</td>
</tr>
<tr>
<td>Central Engineering Services</td>
<td>Public Events Ticket Office</td>
</tr>
<tr>
<td>Central Plant</td>
<td>Public Relations</td>
</tr>
<tr>
<td>Church Laboratory</td>
<td>Ricketts House</td>
</tr>
<tr>
<td>Crellin Laboratory</td>
<td>Robinson Laboratory</td>
</tr>
<tr>
<td>Dabney Hall</td>
<td>Linde Hall</td>
</tr>
<tr>
<td>Dabney House</td>
<td>South Hill Buildings</td>
</tr>
<tr>
<td>Downs Laboratory</td>
<td>South Wilson Buildings</td>
</tr>
<tr>
<td>Facilities Management</td>
<td>Spalding Laboratory</td>
</tr>
<tr>
<td>Firestone Laboratory</td>
<td>Steele Laboratory</td>
</tr>
<tr>
<td>Fleming House</td>
<td>Synchrotron Laboratory</td>
</tr>
<tr>
<td>Gates Annex</td>
<td>Thomas Laboratory</td>
</tr>
<tr>
<td>Guggenheim Laboratory</td>
<td>Transportation Center</td>
</tr>
<tr>
<td>Isotope Laboratory</td>
<td>Venerable House</td>
</tr>
<tr>
<td>Jorgensen Laboratory</td>
<td>Young Health Center</td>
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<tr>
<td></td>
<td>South Wilson Properties:</td>
</tr>
<tr>
<td></td>
<td>241 South Wilson</td>
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<td></td>
<td>255 South Wilson</td>
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<td>315 South Wilson</td>
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<td>373 South Wilson</td>
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<td>375 South Wilson</td>
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<td>505 South Wilson</td>
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<td>515 South Wilson</td>
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<td>535 South Wilson</td>
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<td>551 South Wilson</td>
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<td></td>
<td>565 South Wilson</td>
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<tr>
<td></td>
<td>South Hill Properties:</td>
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<td></td>
<td>275 South Hill</td>
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<td></td>
<td>287 South Hill</td>
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<td>295 South Hill</td>
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<td>305 South Hill</td>
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<td>315 South Hill</td>
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<td></td>
<td>345 South Hill</td>
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<td></td>
<td>383 South Hill</td>
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<tr>
<td></td>
<td>Chester:</td>
</tr>
<tr>
<td></td>
<td>266 S. Chester</td>
</tr>
</tbody>
</table>
APPENDIX II – ASBESTOS PROCESS FLOW

- Facilities
  - Planning Design and Construction
  - Facilities Operations and Services (Shops)
  - Faculty Housing

Determine Project Scope: Required for projects that might disturb existing ACM

Asbestos Project Check: Properties built before 1980

Check Existing Asbestos BOX Drive Files (link)

Asbestos identified in work area

No record of asbestos in direct work area

Previous work area identified as having asbestos

Confirm with certified 3rd party contractor if data is enough for SCQAQM notification

Past sampling available, no asbestos detected

Asbestos program not applicable. Proceed with project

No asbestos detected

Area sampling for asbestos

Asbestos Detected

Notify Primary Stakeholders

General Contractor
Division Contact
EH&S
APPENDIX III: ASBESTOS PROJECT PROCEDURES

- Project area positive for asbestos
  - Asbestos remediation by certified asbestos contractors
  - Contractor Certification Review: Information should be required prior to contract award
    - Facilities Ops, Shop and D&C
  - Work Plan
    - Area Protection
    - Ventilation
    - Signage
    - Clearance sampling
  - Campus notification
    - Asbestos work area 10-14 days prior to start of work
  - Project Start
    - Signage Posted
    - Ventilation
    - Area Protection
  - Clearance Sampling (if applicable) before releasing work area
  - EHS – Hazardous Waste Manifest
  - Information stored in Caltech BOX drive Archive (link)

- Supervisor Certification
- Worker certification
- Company asbestos certification
- Area Protection
- Signage
- Ventilation
- Clearance Sampling
- Approved Asbestos Disposal Site (EHS)
APPENDIX IV: ASBESTOS-CONTAINING MATERIALS

The EPA has classified all asbestos-containing materials into three categories:
1. Thermal System Insulation (TSI)
2. Surfacing Materials
3. Miscellaneous Materials

Thermal System Insulation

Insulation is used on mechanical systems to prevent heat loss or gain, and condensation. Steam and hot water lines, boiler tanks, expansion joints, fittings, and other mechanical systems are commonly insulated with prefabricated asbestos-containing materials. The material is typically gray or off-white in color and encased in a plaster-impregnated canvas wrapping.

Asbestos-containing mud compounds are often used on elbows, valves, identification plates, miscellaneous fittings, and other special mechanical applications.

Surfacing Materials

ACM sprayed or troweled onto surfaces for acoustical, decorative, or fireproofing purposes.

Asbestos has been blended into spray-applied and troweled-on products, including:
- Structural fireproofing
- Stucco
- Plaster
- Acoustical and decorative surfaces
- Joint compounds

Spray-applied structural fireproofing has been applied to structural steel (e.g., I-beams, metal decking underneath the roof and between floors, etc.), building shafts, and over-sprayed onto other building members.

The off-white or gray material is either hard and granular in form or soft and fluffy.

There are instances where exterior Stucco, interior acoustical surfaces (e.g., “cottage cheese” ceiling), and joint compounds used for seaming gypsum wall boards have been identified as asbestos-containing materials and may be present in some campus buildings.

Miscellaneous Materials

Products not utilized as TSI or surfacing materials are classified as miscellaneous materials. Following is a list of some examples:
- Cement (Transite) pipes
- Ceiling tiles
- Mastic (used as glue or adhesive on floor or ceiling tiles)
- Fire doors
- Gaskets
- Vinyl floor covering (9” x 9” floor tiles and linoleum)
- Ductwork flexible connections
- Electrical wiring insulation
- Roofing felt
- Roofing flashing
- Laboratory fume hood ducting and paneling

List of common asbestos-containing materials (ACM)
The following list has been developed as a reference for commonly encountered ACM. This list does not include every product or material that may contain asbestos. It is intended as a general guide to highlight which materials should be considered suspect.

<table>
<thead>
<tr>
<th>Acoustical plaster</th>
<th>Electrical wiring insulation</th>
<th>Pipe insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt floor tile</td>
<td>Elevator brake shoes</td>
<td>Roofing felt</td>
</tr>
<tr>
<td>Blown-in insulation</td>
<td>Fire blankets</td>
<td>Roofing shingles</td>
</tr>
<tr>
<td>Boiler insulation</td>
<td>Fire doors</td>
<td>Spackling compounds</td>
</tr>
<tr>
<td>Ceiling tiles</td>
<td>Fireproofing</td>
<td>Spray-applied insulation</td>
</tr>
<tr>
<td>Cement (Transite) pipes</td>
<td>Heating ducts</td>
<td>Textured paints and coatings</td>
</tr>
<tr>
<td>Cement siding</td>
<td>High temperature gaskets</td>
<td>Thermal taping compounds</td>
</tr>
<tr>
<td>Cement wallboard</td>
<td>HVAC duct insulation</td>
<td>Vinyl floor tile</td>
</tr>
<tr>
<td>Chalkboards</td>
<td>Joint compounds</td>
<td>Vinyl sheet flooring</td>
</tr>
<tr>
<td>Cooling towers</td>
<td>Laboratory bench tops</td>
<td>Wallboard</td>
</tr>
<tr>
<td>Decorative plaster</td>
<td>Laboratory thermal gloves</td>
<td></td>
</tr>
<tr>
<td>Electrical cloth</td>
<td>Laboratory fume hoods</td>
<td></td>
</tr>
<tr>
<td>Electrical panels</td>
<td>Mastics (flooring, ceiling, etc.)</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX V: REGISTERED ASBESTOS ABATEMENT CONTRACTORS –

Registration with Cal/OSHA is required for all contractors who remove 100 square feet or more of the surface area of asbestos-containing building materials with an asbestos content of more than 0.1%.

Due to the nature of asbestos abatement work, only Cal/OSHA-registered contractors can perform large-scale (>100 ft²) asbestos abatement project work at the Institute. This requirement ensures that asbestos abatement contractors have all the required training, licensing, and insurance to conduct asbestos abatement work. Only contractors who meet the regulatory certification and contract insurance requirements for working with asbestos can perform asbestos abatement work for Caltech.

Asbestos abatement contractors are responsible for completing and submitting any required South Coast Air Quality Management District (SCAQMD) and California Occupational Safety and Health Administration (Cal/OSHA) asbestos work notifications and providing copies of these notification forms to the specific Facilities Operations group.
APPENDIX VI: DISPOSAL OF HAZARDOUS WASTE MATERIALS

The Office of Environmental, Health, and Safety (EH&S) is responsible for signing the asbestos hazardous waste manifests (as the generator representative), keeping the generator copy of each manifest, and coordinating the proper disposal of hazardous waste.

EH&S reviews the contractor’s hazardous waste procedures when disposing of asbestos containing materials before the hazardous waste materials leave the Campus. Only approved hazardous waste sites are to be utilized by selected 3rd party asbestos contractors.
CALTECH APPROVED HAZARDOUS WASTE DISPOSAL SITES

ASBESTOS

WASTE MANAGEMENT AZUSA
1211 W. Gladstone Street
Azusa, CA 91702
626-334-0719

WASTE MANAGEMENT – SIMI VALLEY
2801 Madera Road
Simi Valley, CA 93065
(805) 522-9400

WASTE MANAGEMENT – KETTLEMAN HILLS
35251 Skyline Road
Kettleman City, CA 93239
559-386-9711

COMBINED TSCA AND RCRA WASTE

WASTE MANAGEMENT KETTLEMAN
35251 Skyline Road
Kettleman City, CA 93239
559-386-9711

REVISED: 2024
FOR MORE INFORMATION, PLEASE CONTACT THE CALTECH EH&S OFFICE
safety@caltech.edu or 626-395-6727
APPENDIX VII: CALTECH ASBESTOS SUMMARY FORM

**Caltech**

Asbestos Project Summary

<table>
<thead>
<tr>
<th>Project Name/Description:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Manager/Supervisor:</td>
<td></td>
</tr>
<tr>
<td>Division/Business Group:</td>
<td></td>
</tr>
<tr>
<td>Project Start Date:</td>
<td></td>
</tr>
<tr>
<td>Project Completion Date:</td>
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</tbody>
</table>

The purpose of this document is to describe the project area and identify the outcome of any building materials that were identified as containing asbestos. Please complete the form after all abatement activities have been completed and file in the Campus Asbestos Survey Archive.

1. **Building Name and Room(s) sampled**

2. **Itemize what material(s) were sampled that contain asbestos**

3. **Itemize building materials that were abated/removed as part of the project**

4. **Itemize building materials identified as containing asbestos that were not removed**

   - Checkmark if not applicable (all known asbestos-containing materials were removed)

File Path: Box Drive → Campus Asbestos Survey Archive → Building → Floor → (Project Folder)
APPENDIX VIII: CALTECH ANNUAL NOTIFICATION LETTER

To: The Caltech Community
From: Lauriane Quenee, Senior Director - Environmental Health & Safety
Date: November 1, 2023
Re: Annual Asbestos Notification

Annual written notice of the presence of asbestos-containing building materials is being provided to all campus Faculty, Postdoctoral Scholars, Staff, and Students as required by California Health and Safety Code §25915.2. Copies of this legislation are available in the Environmental Health & Safety (EH&S) Office.

Prior to 1979 asbestos was used extensively in the building industry throughout the United States for thermal insulation, fireproofing, and in structural support materials. At Caltech, asbestos was used to insulate hot water and steam pipes as well as ventilation ducts. It may be found in some attics, mechanical rooms, and in some floor and ceiling tiles.

The mere presence of asbestos in a building does not necessarily mean that a health hazard exists. Asbestos-containing building materials are not a health threat unless asbestos fibers become airborne and are inhaled.

In areas where the asbestos is bonded or encapsulated, such as floor tiles or properly maintained insulation materials, there is little or no risk to health.

Exposure to airborne asbestos increases your risk of developing lung disease. Three of the major health effects associated with asbestos exposure are: 1) lung cancer; 2) mesothelioma, a rare form of cancer that is found in the thin lining of the lung, chest, and the abdomen and heart; and 3) asbestosis, a serious progressive, long-term, non-cancer disease of the lungs.

Accordingly, it is important not to disturb asbestos-containing materials. Caltech’s policy restricts work on asbestos-containing materials to properly trained and equipped personnel. Moving, drilling, cutting, or otherwise disturbing such materials can pose a health risk and should not be attempted by untrained personnel. Campus Faculty, Postdoctoral Scholars, Staff, and Students should immediately notify EH&S if they observe suspected asbestos-containing materials which are not properly maintained.

The Environmental Health & Safety Office maintains records of asbestos sampling and air monitoring results performed during the course of asbestos abatement work. These records are available for review by appointment by contacting EH&S at extension 6727 or writing safety@caltech.edu.
APPENDIX IX: REGULATORY REFERENCES

2. South Coast Air Quality Management District (SCAQMD), Rule 1403, Asbestos Emissions for Demolition/Renovation Activities.
3. Cal/OSHA, Title 8, California Code of Regulations (CCR), General Industry Safety Orders (GISO), Section 5208, Asbestos.
4. Cal/OSHA, Title 8, California Code of Regulations (CCR), Construction Safety Orders (CSO), Section 1529, Asbestos. (Specific work requirements)
5. Cal/OSHA, Title 8, California Code of Regulations (CCR), Section 341.6, Asbestos-Related Work Registration Requirements.
6. Cal/OSHA, Title 8, California Code of Regulations (CCR), Section 5203, Carcinogen Report of Use Requirements.