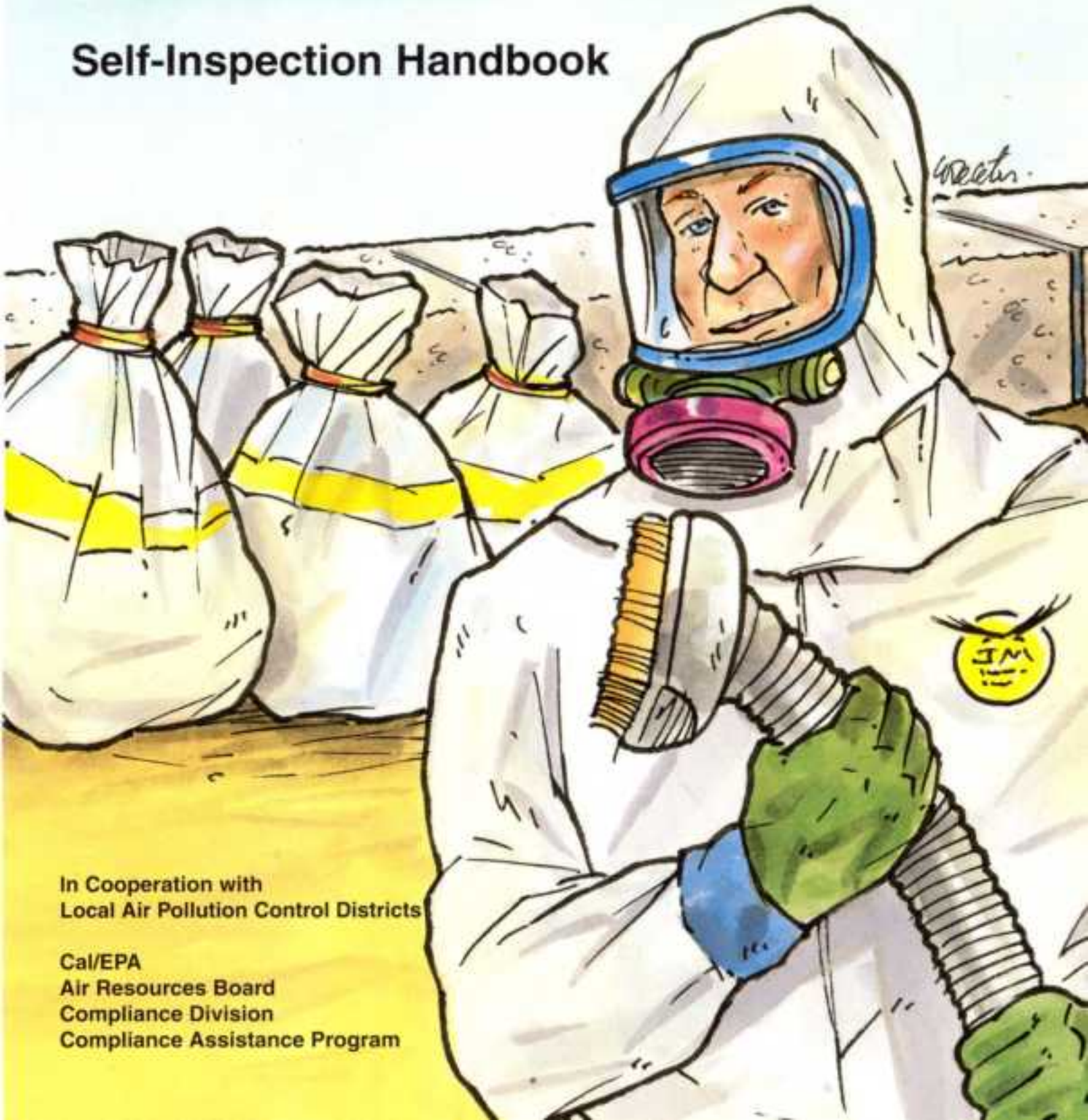
ASBESTOS

WHAT YOU NEED TO KNOW

Self-Inspection Handbook



In Cooperation with
Local Air Pollution Control Districts

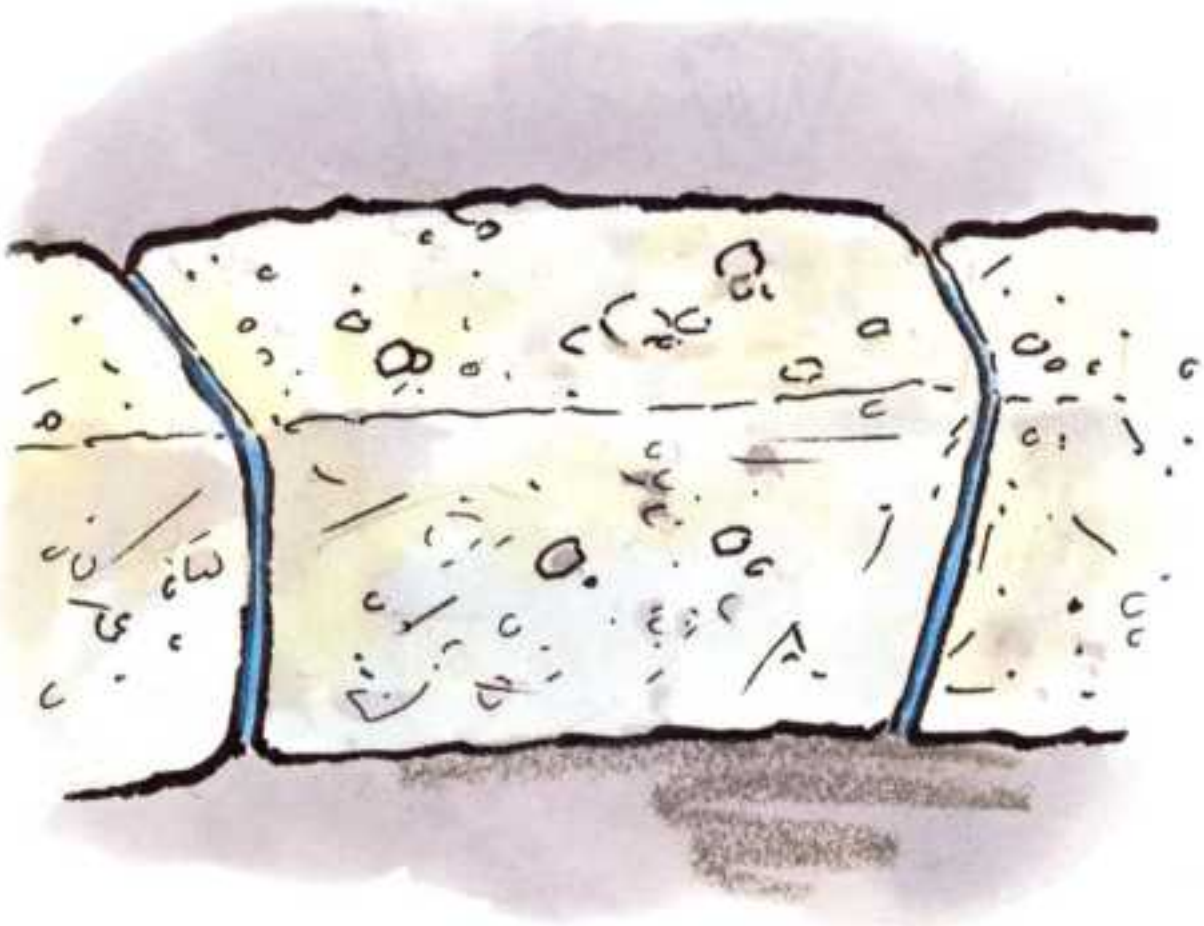
Cal/EPA
Air Resources Board
Compliance Division
Compliance Assistance Program

What You Need to Know...

This handbook is designed to help you understand the air pollution laws which affect asbestos demolition and renovation in California. Read on and see what you can do to stay healthy, improve the environment, and stay in compliance.

You can make a difference!!

What is Asbestos?

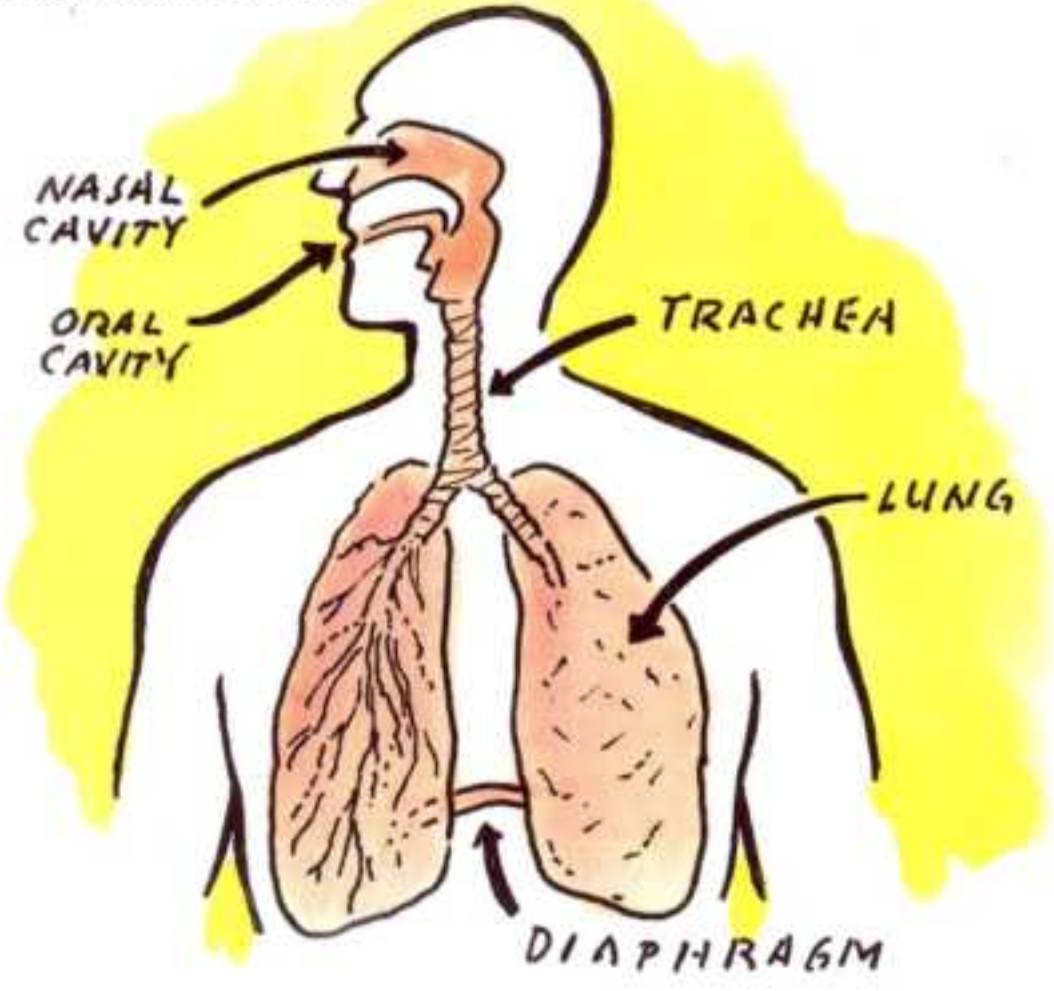


Asbestos is a mineral compound of silicon, oxygen, hydrogen, and various metals. Three of the most common types are chrysotile, amosite, and crocidolite. Unlike most minerals, asbestos breaks up into fine, light fibers invisible to the naked eye that can only be seen under a microscope.

Asbestos was a popular component in commercial products from the early 1900's to the 1970's. Asbestos is durable, fire retardant, resists corrosion, and insulates well. An estimated 3,000 different types of commercial products were produced with some amount of asbestos. The use of asbestos ranges from paper products and brake linings to floor tiles and insulation.

Intact and undisturbed asbestos-containing material (ACM) usually does not pose a health risk. Asbestos becomes a problem when, due to damage, disturbance, or deterioration over time, the material releases fibers into the air.

What Are Its Health Effects?



Asbestos fibers can cause serious health problems. If inhaled, these tiny fibers can cause normal functions of the lungs to be disturbed. Exposure increases the risk of developing lung cancer, mesothelioma, or asbestosis, which is a scarring of the lungs that leads to breathing problems. Asbestos inhalation may also be linked to cancer of the stomach, intestines, and rectum, as well. It could take anywhere from 20 to 30 years after the first exposure for symptoms to occur. Severe health problems from asbestos exposure have been experienced by workers who held jobs in industries such as shipbuilding, mining, milling, and fabricating.

Medical investigations have shown that inhalation is the principal route of entry that leads to asbestos-related diseases. There is no known safe exposure to asbestos. The greater the exposure, the greater the risk of developing an asbestos-related disease. Smokers exposed to asbestos have a much greater chance of developing lung cancer than just from smoking alone, or just from asbestos exposure alone.

Where is Asbestos Found?

Most new products do not contain asbestos. Those few products made which still contain asbestos that could be inhaled are required to be labeled as such. However, until the 1970s, many types of building products, insulation materials, and other products contained asbestos. In fact, about 20 percent of all public buildings still have some type of *friable* asbestos-containing material.

Friable ACM is any material containing more than one percent asbestos (as Determined by Polarized Light Microscopy) that, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure. Common products that might have contained asbestos in the past, and conditions which may release fibers, include:

- INSULATION ON WATER PIPES, BOILERS, and FURNACE AIR DUCTS. These materials may release asbestos fibers if damaged, repaired, or removed improperly.

- RESILIENT FLOOR TILES (vinyl asbestos, asphalt, and rubber), the backing on VINYL SHEET FLOORING, and ADHESIVES used for installing floor tile. Sanding tiles can release fibers; so may scraping or sanding the backing of sheet flooring during removal.

- CEMENT SHEET, MILLBOARD, and PAPER used as insulation around furnaces and woodburning stoves. Repairing or removing appliances may release asbestos fibers; so may cutting, tearing, sanding, drilling, or sawing insulation.

- DOOR GASKETS in furnaces, wood stoves, and coal stoves. Worn seals can release asbestos fibers during use.

Where is Asbestos Found? (cont.)

- SOUNDPROOFING OR DECORATIVE MATERIAL sprayed on walls and ceilings. Loose, crumbly, or water-damaged material may release fibers; so will sanding, drilling, or scraping the material.

- PATCHING AND JOINT COMPOUNDS for walls and ceilings, and TEXTURED PAINTS. Sanding, scraping, or drilling these surfaces may release asbestos.

- ASBESTOS CEMENT ROOFING, SHINGLES, and SIDING. These products are not likely to release asbestos fibers unless sawed, drilled, cut, or run over with heavy equipment.

- ARTIFICIAL ASHES AND EMBERS sold for use in gas-fired fireplaces. Also, other older household products such as FIRE PROOF GLOVES, STOVE-TOP PADS, IRONING BOARD COVERS, and certain HAIRDRYERS.

- AUTOMOBILE BRAKE PADS AND LININGS, CLUTCH FACINGS, and GASKETS.

Regulations Governing Asbestos...

Pursuant to the Clean Air Act (CAA) of 1970, USEPA established the Asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP). It is intended to minimize the release of asbestos fibers during activities involving the handling of asbestos. It specifies work practices to be followed during renovation, demolition or other abatement activities when *friable* asbestos is involved. On March 31, 1971 the USEPA identified asbestos as a hazardous pollutant, and on April 6, 1973 the USEPA first enforced the asbestos NESHAP in 40 CFR Part 61. The NESHAP banned all sprayed-on applications of asbestos, such as sprayed-on fireproofing in 1978.

What Sources Are Covered by the Asbestos NESHAP?

Among others, the following activities and facilities are currently regulated by the Asbestos NESHAP:

- The milling of asbestos
- The commercial manufacture of products that contain commercial asbestos
- The demolition of all facilities
- The renovation of facilities that contain friable ACM
- The spraying of ACM
- The processing (fabricating) of any manufactured products that contain asbestos
- The use of insulating materials that contain commercial asbestos
- The disposal of asbestos-containing waste generated during milling, manufacturing, demolition, renovation, spraying, and fabricating operations
- The closure and maintenance of inactive waste disposal sites
- The operation of and reporting on facilities that convert asbestos containing waste material into nonasbestos material
- The design and operation of air cleaning devices
- The reporting of information pertaining to process control equipment, filter devices, asbestos generating processes, etc.
- Active waste disposal sites

Regulations Governing Asbestos...

The Toxic Substances Control Act (TSCA) first authorized the USEPA to regulate asbestos in schools and Public and Commercial buildings under Title II of the law, also known as the Asbestos Hazard Emergency Response Act (AHERA).

AHERA requires local education agencies to inspect their schools (grades K to 12) for ACMs and prepare management plans to reduce the asbestos hazard. This Act also established a program for the training and accreditation of individuals performing certain types of asbestos work.

The Asbestos School Hazard Abatement and Reauthorization Act (ASHARA) reauthorized AHERA and made some minor changes in the Act. It also reauthorized the ASHARA.

On July 12, 1989 the USEPA adopted the Asbestos Ban and Phase Out Rule (ABPO) under authority of the TSCA. Under this rule, certain asbestos-containing products were banned at staged intervals over a seven year period. Its objective was to reduce health risks to the public by eliminating certain asbestos-containing products and replacing them with safer alternatives.

Who Is Responsible for Enforcing the Asbestos NESHAP Regulation?

Under Section 112 of the CAA, Congress gave the USEPA the responsibility for enforcing regulations relating to asbestos renovations and demolitions. The CAA allows the USEPA to delegate this authority to state and local agencies. Even after the USEPA delegates responsibility to a state or local agency, the USEPA retains the authority to oversee agency performance and to enforce NESHAP regulations as appropriate.

The California Air Resources Board (ARB) assists the USEPA in enforcing NESHAP for asbestos. ARB staff conducts inspections, investigates complaints, and collects demolition/renovation data from the 16 non-delegated air pollution control districts (APCDs) in California. ARB staff then submits a quarterly report to the USEPA through the Asbestos Contractor Tracking System/National Asbestos Registry System (ACTS/NARS). ARB staff also helps to conduct asbestos inspections in the 19 California delegated APCDs and conducts asbestos training for all APCDs.

Always check with your local APCD before starting any asbestos demolition/renovation project, residential or commercial.

Written Notification Requirement...

The Asbestos NESHAP, Section 61.145, requires written notification of demolition/renovation operations. In non-delegated districts, the ARB form located in the back folder of this notebook may be used to fulfill this requirement. Only complete notification forms are acceptable. The notification should be typewritten and postmarked or delivered no later than ten working days prior to the beginning of the asbestos removal activity or demolition, and should be sent to the ARB and USEPA Region IX. For asbestos demolition or removal in delegated districts, contact your local APCD for district notification forms.

Delegated Districts

1. Antelope Valley APCD
2. Bay Area AQMD
3. Great Basin Unified APCD
4. Kern Desert APCD
5. Lake County AQMD
6. Mendocino County APCD
7. Modoc County APCD
8. Monterey Bay Unified APCD
9. North Coast Unified AQMD *(Del Norte, Humboldt, Trinity)*
10. Northern Sonoma County
11. Sacramento Metro AQMD
12. Mojave Desert AQMD
13. San Diego County APCD
14. San Joaquin Valley UAPCD *(Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare)*
15. San Luis Obispo County APCD
16. Santa Barbara County APCD
17. South Coast AQMD *(Los Angeles, Orange, Riverside)*
18. Ventura County APCD
19. Yolo-Solano County AQMD

Non-Delegated Districts

1. Amador County APCD
2. Butte County APCD
3. Calaveras County APCD
4. Colusa County APCD
5. El Dorado County APCD
6. Feather River Unified AQMD *(Sutter, Yuba)*
7. Glenn County APCD
8. Imperial County APCD
9. Lassen County APCD
10. Mariposa County APCD
11. Northern Sierra AQMD *(Nevada, Sierra, Plumas)*
12. Placer County APCD
13. Shasta County APCD
14. Siskiyou County APCD
15. Tehama County APCD
16. Tuolumne County APCD

Delegated APCDs are those that *have* adopted the NESHAP;
non-delegated APCDs are those who have *not* adopted the NESHAP.

How Do the NESHAP Regulations Apply?

Asbestos NESHAP regulations must be followed for all renovations of facilities with at least 80 linear meters (260 linear feet) of regulated asbestos-containing materials (RACM) on pipes, or 15 square meters (160 square feet) of regulated asbestos-containing materials on other facility components, or at least one cubic meter (35 cubic feet) of facility components where the amount of RACM previously removed from pipes and other facility components could not be measured before stripping. These amounts are known as the "threshold" amounts. Some districts have smaller threshold amounts.

It is important to note that the Asbestos NESHAP regulation does <u>not</u> require you to inspect your property unless a demolition/renovation is planned. AHERA, a federal regulation, requires general inspections which mandate that schools must be inspected for asbestos. However, all demolition/renovation projects must notify the appropriate regulatory agency, even if no asbestos is present at the site. All demolition/renovation projects are "subject" to the Asbestos NESHAP insofar as owners and operators must determine if and how much asbestos is present at the site.

How to Manage An Asbestos Problem...

If you have an asbestos problem, there are two types of corrections: repair and removal.

During a repair, the asbestos remains in place. Repair is usually less expensive than removal, but it may make later removal of asbestos, if necessary, more difficult and costly.

Any repair, other than a minor repair of an area smaller than your hand, must be done by a trained professional. While you may do minor repairs yourself, it is a good idea to have them also done by professionals since there is always the risk of exposure to asbestos fibers when working around asbestos. REPAIR usually involves either sealing or covering the asbestos material, as defined below.

Sealing (encapsulation) involves treating the material with a sealant that either binds the asbestos fibers together or coats the material so fibers are not released. Pipe, furnace, and boiler insulation can sometimes be repaired this way. This should be done only by a professional trained to handle asbestos safely.

Covering (enclosure) involves placing something over or around the material that contains asbestos to prevent release of fibers. Exposed insulated piping may be covered with a protective wrap or jacket.

REMOVAL is usually the most expensive method and poses the greatest risk of fiber release during the work. It presents a final solution to the asbestos problem, but other options may be better unless removal is required by state and local regulations, the condition of the material is beyond the point where it can be repaired, or major remodeling will disturb the material. Removal is complex and must be done only by a contractor with special training. Improper removal may actually increase the health risks to you and your family.

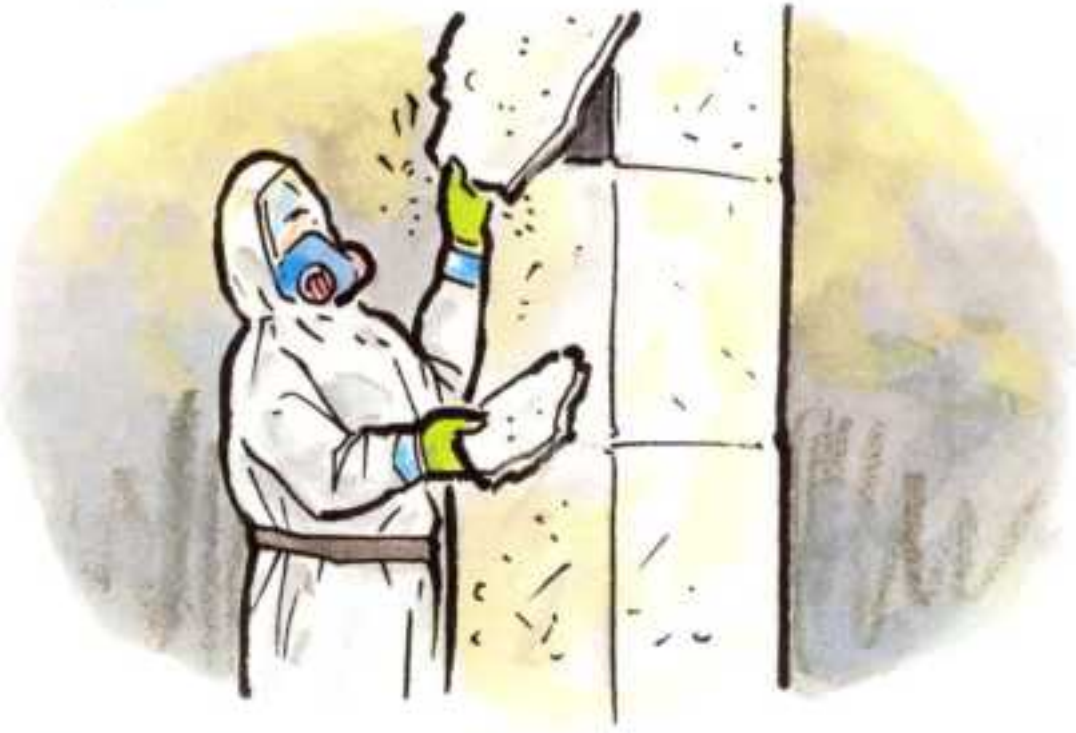
Asbestos Professionals: Who Are They and What Can They Do?

Asbestos professionals are trained in handling asbestos material. The type of professional will depend on the type of product and what needs to be done to correct the problem. Asbestos professionals can conduct home inspections, take samples of suspected material, assess its condition, and advise about what corrections are needed and who is qualified to make these corrections.

Some firms offer combinations of testing, assessment, and correction. A professional hired to assess the need for corrective action should not be connected with an asbestos-abatement firm. It is better to use two different firms so there is no conflict of interest. Services vary from one area to another.

The federal government has training courses for asbestos professionals around the country. Some state and local governments also have or require training or certification courses. Ask asbestos professionals to document their completion of federal or state-approved training. Each person performing work should provide proof of training and licensing in asbestos work, such as completion of EPA-approved training. State and local health departments or EPA regional offices may have listings of licensed professionals in your area.

As of November 1991, the Asbestos NESHAP requires a person trained in the provisions of this rule and the means of complying with them be on-site when asbestos-containing material is stripped, removed, or disturbed. Under AHERA, all contractors and employees involved in the removal and disposal of ACM from schools must be accredited. Additionally, most states, including California, require that all workers be accredited before they remove asbestos from any facility.



If you have a problem that requires the services of asbestos professionals, check their credentials carefully. Hire professionals who are trained, experienced, reputable, and accredited. Before hiring a professional, ask for references from previous clients. Find out if they were satisfied with the work performed. Ask whether the professional has handled similar situations. Obtain cost estimates from several professionals, as the charges for these services can vary.

Though private homes are usually not covered by the same asbestos regulations that apply to schools and public buildings, professionals should still use procedures described during federal or state-approved training. Homeowners should be alert to misleading claims by asbestos consultants and contractors. There have been reports of firms incorrectly claiming that asbestos materials in homes must be removed. In other cases, firms have encouraged unnecessary removals or performed them improperly. Unnecessary removals are a waste of money. Improper removals may actually increase the health risks to you and your family.

Buildings are not the only asbestos problem. Asbestos-containing automobile brake pads and linings, clutch facings, and gaskets should be repaired and replaced only by a professional using special protective equipment.

Does the USEPA License Landfills for Asbestos Waste?

USEPA has established asbestos disposal requirements for active and inactive disposal sites under the NESHAP, and general requirements for solid waste disposal under the Resource Conservation and Recovery Act (RCRA). In addition, state and/or local agencies usually require asbestos landfills to be approved or licensed.

You may obtain a list of licensed landfills through your state and/or local agencies upon request. Solid waste control agencies are listed in local telephone directories under state, county or city headings.

Instructions: Asbestos Demolition/Renovation Notification Form

(Non-Delegated Districts Only)

This form may be used to satisfy the written-notification requirement of Section 61.145 for asbestos removal or demolition in *non-delegated districts* only. For asbestos demolition or removal in delegated APCDs (see page 10 of the handbook), contact the APCD for district notification forms.

The notification should be typewritten and postmarked or delivered no later than ten days prior to the beginning of the asbestos demolition or removal activity. Please submit the original form to USEPA and a copy to CARB at the addresses below:

CARB, Compliance Division
Attn: Asbestos NESHAP Program
P.O. Box 2815
Sacramento, CA 95814

U.S. EPA
Attn: Asbestos NESHAP Program
75 Hawthorne Street
San Francisco, CA 94105

INSTRUCTIONS:

I. Type of Notification: Enter "O" if the notification is a first time or original notification, "R" if the notification is a revision of a prior notification, or "C" if the activity has been cancelled.

II. Facility Information: Enter the names, addresses, contact persons and telephone numbers of the following:

Owner: Legal owner of the site at which asbestos is being removed or demolition planned.

Removal Contractor: Contractor hired to remove asbestos.

Other Operator: Demolition contractor, general contractor, or any other person who leases, operates, controls or supervises the site. If known, the name of the site supervisor should be entered as the contact person for the notification. If additional parties share responsibility for this site, demolition activity, renovations or ACM removal, include complete information (including name, address, contact person and telephone number) on additional sheets submitted with the form.

Instructions... (cont.)

III. Type of Operation: Enter "D" for facility demolition, "R" for facility renovation, "O" for ordered demolitions, or "E" for emergency renovations.

IV. Is Asbestos Present? Answer "Yes" or "No" regardless of the amount or type of asbestos.

V. Facility Description: Provide detailed information on the areas being renovated or demolished. If applicable, provide the floor numbers and room, numbers where renovations are to be conducted.

Site Location: Provide information needed to locate site in the event that the address alone is inadequate.

Building Size: Provide in square meters or square feet.

No. of Floors: Enter the number of floors including basement or ground level floors.

Age in Years: Enter approximate age of facility.

Present Use/Prior Use: Describe the primary use of the facility or enter the following codes: H - Hospital; S - School; P - Public Building; O - Office; I - Industrial; U - University or College; B - Ship; C - Commercial; or R - Residence.

VI. Asbestos Detection Procedure: Describe methods and procedures used to determine whether ACM is present at the site, including a description of the analytical methods employed.

VII. Approximate Amount of Asbestos Including: (1) Regulated ACM to be removed (including nonfriable ACM to be sanded, ground or abraded); (2) Category I ACM not removed; and (3) Category II ACM not removed.

For both removals and demolitions, enter the amount of RACM to be removed by entering a number in the appropriate box and an "X" for the unit. For demolitions only, enter the amount of Category I and II nonfriable asbestos not to be removed in the appropriate boxes.

Instructions... (cont.)

Category I nonfriable material includes packing, gaskets, resilient floor covering and asphalt roofing materials containing more than one percent asbestos. Category II nonfriable material includes any material, excluding Category I products, containing more than one percent asbestos, that when dry, cannot be crumbled, pulverized or reduced to powder.

VIII. Scheduled Dates of Asbestos Removal (MM/DD/YY): Enter scheduled dates (month/day/year) for asbestos removal work. Asbestos removal work includes any activity, including site preparation, which may break up, dislodge or disturb asbestos material.

IX. Scheduled Dates of Demolition/Renovation (MM/DD/YY): Enter scheduled dates (month/day/year) for beginning and ending the planned demolition or renovation.

X. Demolition of Planned Demolition or Renovation Work, and Method(s) to be Used: Include in this description the demolition and renovation techniques to be used and a description of the areas and types of facility components which will be affected by this work.

XI. Description of Engineering Controls and Work Practices to be Used to Control Emissions of Asbestos at the Demolition and Renovation Site: Describe the work practices and engineering controls selected to ensure compliance with the requirments of the regulations, including both asbestos removal and waste-handling emission control procedures.

XII. Waste Transporter(s): Enter the names, addresses, contact persons and telephone numbers of the persons or companies responsible for transporting ACM from the removal site to the waste disposal site. If the removal contractor or owner is the waste transporter, state "same as owner" or "same as removal contractor." If additional parties are responsible, include complete information on an additional sheet submitted with the form.

XIII. Waste Disposal Site: Identify the waste disposal site, including the complete name, location and telephone number of the facility. If ACM is to be disposed of at more than one site, provide complete information on an additional sheet submitted with the form.

Need More Information?

Air Resources Board (800) 952-5588 **District: _____**

Multi-County Districts

1 - Bay Area (415) 749-5000
2 - Feather River (530) 634-7659
3 - Great Basin (760) 872-8211
4 - Monterey Bay (831) 647-9411
5 - North Coast (707) 443-3093
6 - Northern Sierra (530) 274-9360
7 - South Coast (909) 396-2000
8 - Yolo-Solano (530) 757-3650
9 - San Joaquin Valley (559) 230-6000

County Districts

Amador (209) 257-0112
Antelope Valley (661) 723-8070
Butte (530) 891-2882
Calaveras (209) 754-6504
Colusa (530) 458-0590
El Dorado (530) 621-6662
Glenn (530) 934-6500
Imperial (760) 482-4606
Kern (661) 862-5250
Lake (707) 263-7000
Lassen (530) 251-8110
Mariposa (209) 966-2220
Mendocino (707) 463-4354
Modoc (530) 233-6419
Mojave Desert (760) 245-1661
No. Sonoma (707) 433-5911
Placer (530) 889-7130
Sacramento (916) 874-4800
San Diego (858) 650-4700
San Luis Obispo (805) 781-4247
Santa Barbara (805) 961-8800
Shasta (530) 225-5789
Siskiyou (530) 841-4029
Tehama (530) 527-3717
Tuolumne (209) 533-5693
Ventura (805) 645-1400

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California Environmental Protection Agency
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