

DEFINITIONS	2
WHAT YOU NEED TO KNOW ABOUT ASBESTOS	6
SECTION 1. NON-NESHAP FACILITIES	11
SECTION 2. RENOVATION OF A NESHAP FACILITY	12
2.1 With Less Than EPA Regulated Amounts	12
2.2 With At Or Greater Than EPA Regulated Amounts	12
SECTION 3. DEMOLITION OF A NESHAP FACILITY	13
3.1 With Less Than EPA Regulated Amounts	13
3.2 With At Or Greater Than EPA Regulated Amounts	13
SECTION 4. ASBESTOS CEMENT A/C PIPE	14
4.1 Less Than 260 Linear Feet	14
4.2 260 Linear Feet Or Greater	14
4.3 35 Cubic Feet or Greater Of Broken A/C Pipe Pieces	15
4.4 New Pipe (Not Installed)	15
SECTION 5. ROOFING AND SIDING REMOVAL OPERATIONS	17
5.1 Less Than 160 Square Feet	17
5.2 160 Square Feet Or Greater of Cat II Non-Friable ACRM (That Has Or Will Become Friable RACM)	17
5.3 160 Square Feet Or Greater of Cat II Non-Friable ACRM (That Has Not Or Will Not Become Friable RACM)	18
5.4 160 Square Feet Or Greater Of Cat II Non-Friable ACRM	18
5.5 160 Square Feet Or Greater Of Cat I Non-Friable ACRM	18
SECTION 6. VINYL ASBESTOS FLOOR TILE (VAT) REMOVAL	20
6.1 Non NESHAP Facility	20
6.2 NESHAP Facility	20
6.3 Compliant Work Practices	20
6.4 Sheet Vinyl Floor Covering	21
SECTION 7. ASBESTOS BULK SAMPLING PROCEDURES	22
SECTION 8. FIRE DAMAGE AND RACM NOT REMOVED BEFORE DEMOLITION	23
SECTION 9. PROCEDURES FOR ORDERED DEMOLITION	24
SECTION 10. LIST OF U. S. EPA ASBESTOS NESHAP NOTICES OF CLARIFICATION	26

All terms that are used in this reference sheets and are not defined below are given the same meaning as in the Clean Air Act.

Accredited or accreditation when referencing to a person or laboratory means that such person or laboratory is accredited in accordance with section 206 of Title II of the Act.

Active waste disposal site means any disposal site other than an inactive site.

Adequately wet means sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

Asbestos means the asbestiform varieties of serpentinite (Chrysotile), riebeckite (Crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite.

Asbestos-containing waste materials means mill tailings or any waste that contains commercial asbestos and is generated by a source subject to the provisions of this Subpart. This term includes filters from control devices, friable asbestos waste material, and bags or other similar packaging contaminated with commercial asbestos. As applied to demolition and renovation operations, this term also includes regulated asbestos-containing material waste and materials contaminated with asbestos including disposable equipment and clothing.

Asbestos mills means any facility engaged in converting, or in any intermediate step in converting, asbestos ore into commercial asbestos. Outside storage of asbestos material is not considered a part of the asbestos mill.

Asbestos tailings' means any solid waste that contains asbestos and is a product of asbestos mining or milling operations.

Asbestos waste from control devices means any waste material that contains asbestos and is collected by a pollution control device.

Category I nonfriable asbestos-containing material (ACM) means asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in appendix A, Subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy.

Category II nonfriable ACM means any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos as determined using the methods specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Commercial asbestos means any material containing asbestos that is extracted from ore and has value because of its asbestos content.

Cutting means to penetrate with a sharp-edged instrument and includes sawing, but does not include shearing, slicing, or punching.

Demolition means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

Moving a facility from its foundation is considered a demolition. (US EPA Letter of Clarification dated November 1991)

Emergency renovation operation means a renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by non routine failures of equipment.

Fabricating means any processing (e.g., cutting, sawing, drilling) of a manufactured product that contains commercial asbestos,

of friction products, fabricating includes bonding, debonding, grinding, sawing, drilling, or other similar operations performed as part of fabricating.

Facility means any institutional, commercial, public, industrial, or residential structure, installation, or building including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, (**but excluding residential buildings having four or fewer dwelling units**); any ship; and any active or inactive waste disposal site. For purposes of this definition, any building, structure, or installation that contains a loft used as a dwelling is not considered a residential structure, installation, or building. Any structure, installation or building that was previously subject to this subpart is not excluded, regardless of its current use or function.

Note 1: Single residential buildings that are demolished or renovated are not covered by the asbestos NESHAP. This is true whether the demolition or renovation is performed by agents of the owner of the property or whether the demolition or renovation is performed by agents of a municipality. However, the residential exemption does not apply where multiple (more than one) small residential buildings on the same site are demolished or renovated by the same owner or operator as part of the same project or where a single residential building is demolished or renovated as part of a larger project that includes demolition or renovation of a non residential building. (Federal Register, Vol 60 No. 145 Friday, July 28, 1995, Title 40, Code of Federal Regulation, Part 61 [FRL-5286-2])

Note 2: *The asbestos NESHAP requires the removal of all asbestos containing material (ACM) if a facility that contains greater than the threshold amount of asbestos will be demolished by intentional burning. This requirement includes the removal of all Category I and Category II nonfriable ACM which for the purposes of intentional burning shall always be considered regulated asbestos containing material (RACM). 40 CFR, Part 61, Subpart M §61.145(c).*

Note 3: *EPA included bridges in the definition of regulated facilities in the document entitled “Background Information for Promulgated Asbestos NESHAP Revisions. Therefore, bridges are considered a facility, any owner or operator conducting a demolition of a bridge or disturbing asbestos containing material during renovation of a bridge must notify EPA or the local delegated agency and use proper work practices when disturbing the asbestos. (US EPA Letter of Clarification dated March 24, 1997).*

Facility components means any part of a facility including equipment.

Friable asbestos material means any material containing more than 1 percent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR part 763 section 1, Polarized Light Microscopy, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

Fugitive sources means any source of emissions not controlled by an air pollution control device.

Damaged friable surfacing ACM means friable surfacing ACM which has deteriorated or sustained physical injury such that the internal structure (cohesion) of the material is inadequate or which has delaminated such that its bond to the substrate (adhesion) is inadequate, or which, for any other reason, lacks fiber cohesion or adhesion qualities. Such damage or deterioration may be illustrated by the separation of ACM into layers; separation of ACM from the substrate; flaking, blistering, or crumbling of the ACM surface; water damage; significant or repeated water stains, scrapes, gouges, mars or other signs of physical injury on the ACM. Asbestos debris originating from the ACM in question may also indicate damage.

Glove bags means a sealed compartment with attached inner gloves used for the handling of asbestos-containing materials. Properly installed and used, glove bags provide a small work area enclosure typically used for small-scale asbestos stripping operations. Information on glove-bag installation, equipment and supplies, and work practices is contained in the Occupational Safety and Health Administration's (OSHA's) final rule on occupational exposure to asbestos (appendix G to 29 CFR 1926.58).

Grinding means to reduce to powder or small fragments and includes mechanical chipping or drilling.

Inactive waste disposal sites means any disposal site or portions of it where additional asbestos-containing waste material has

In poor condition means the binding of the material is losing its integrity as indicated by peeling, cracking, or crumbling of the material.

Installation means any building or structure or any group of buildings or structures at a single demolition or renovation site that are under the control of the same owner or operator (or owner or operator under common control).

Leak-tight means that solids or liquids cannot escape or spill out. It also means dust-tight.

Malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner so that emissions of asbestos are increased. Failures of equipment shall not be considered malfunctions if they are caused in any way by poor maintenance, careless operation, or any other preventable upset conditions, equipment breakdown, or process failure.

Manufacturing means the combining of commercial asbestos-or, in the case of woven friction products, the combining of textiles containing commercial asbestos with any other material(s), including commercial asbestos, and the processing of this combination into a product. Chlorine production is considered a part of manufacturing.

Natural barriers means a natural object that effectively precludes or deters access. Natural barriers include physical obstacles such as cliffs, lakes or other large bodies of water, deep and wide ravines, and mountains. Remoteness by itself is not a natural barrier.

Nonfriable asbestos-containing material means any material containing more than 1 percent asbestos as determined using the method specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Nonscheduled renovation operation means a renovation operation necessitated by the routine failure of equipment, which is expected to occur within a given period based on past operating experience, but for which an exact date cannot be predicted.

Outside air means the air outside buildings and structures, including, but not limited to, the air under a bridge or in an open air ferry dock.

Owner or operator of a demolition or renovation activity means any person who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation operation, or both.

Particulate asbestos material means finely divided particles of asbestos or material containing asbestos.

Planned renovation operations means a renovation operation, or a number of such operations, in which some RACM will be removed or stripped within a given period of time and that can be predicted. Individual nonscheduled operations are included if a number of such operations can be predicted to occur during a given period of time based on operating experience.

Regulated asbestos-containing material (RACM) means (a) Friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

Remove means to take out RACM or facility components that contain or are covered with RACM from any facility.

Renovation means altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component. Operations in which load-supporting structural members are wrecked or taken out are deemed demolitions.

covering containing more than 1 percent asbestos as determined using polarized light microscopy according to the method specified in appendix A, subpart F, 40 CFR part 763, Section 1, Polarized Light Microscopy.

Roadways means surfaces on which vehicles travel. This term includes public and private highways, roads, streets, parking areas, and driveways.

Site *Note: The term “site” is not defined in the regulations. However, to provide guidance, the EPA notes that a “site” should be a relatively compact area. If a demolition project involves the demolition of several contiguous city blocks, the entire area could be considered a site. However, the EPA believes that demolition of two individual residences separated by several city blocks should not be considered a demolition on a single site. In the EPA’s view, the area may be larger where the area is owned and operated as a unitary area by a single owner/operator. For example, a shopping mall or amusement parks. (Federal Register, Volume 60, Number 145, Friday, July 28, 1995 Pages 38725-38726)*

Strip means to take off RACM from any part of a facility or facility components.

Structural member means any load-supporting member of a facility, such as beams and load supporting walls; or any nonload-supporting member, such as ceilings and nonload-supporting walls.

Visible emission means any emissions, which are visually detectable without the aid of instruments, coming from RACM or asbestos-containing waste material, or from any asbestos milling, manufacturing, or fabricating operation. This does not include condensed, uncombined water vapor.

Waste generator means any owner or operator of a source covered by this subpart whose act or process produces asbestos-containing waste material.

Waste shipment record means the shipping document required to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.

Working day means Monday through Friday and includes holidays that fall on any of the days Monday through Friday.

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

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 to 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 types of commercial products were produced with some amount of asbestos. The use of asbestos ranges from paper products and brake linings to floor tile 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 lead 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 lead 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 that 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 product, 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 (PLM)) 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:

- a. **INSULATION ON WATER PIPES, BOILERS, and FURNACE AIR DUCTS.** These materials may release asbestos fibers if damaged, repaired or removed improperly.
- b. **RESILIENT FLOOR TILES** (vinyl asbestos, asphalt, and rubber), the backing on **VINYL SHEET FLOORING**, and **ADHESIVES** used for installing floor tiles. Sanding tiles can release fibers; so may scraping or sanding the backing of sheet flooring during removal.
- c. **CEMENT SHEET, MILLBOARD, and PAPER** used as insulation around furnaces and wood-burning stoves. Repairing or removing appliances may release asbestos fibers; so may cutting, tearing, sanding drilling, or sawing insulation.
- d. **DOOR GASKETS** in furnaces, wood stoves, and coal stoves. Worn seals can release asbestos fibers during use.

material may release fibers; so will sanding, scraping, the material.

- f. PATCHING AND JOINT COMPOUNDS for walls and ceilings, and TEXTURED PAINTS. Sanding, scraping, or drilling these surfaces may release asbestos.
- g. 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.
- h. ARTIFICIAL ASHES AND EMBERS sold for use in gas-fire fireplaces. Also, other older household products such as FIRE PROOF GLOVES, STOVE-TOP PADS, IRONING BOARD COVERS, and certain HAIR DRYERS.
- i. 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. In November 20, 1990, the US EPA re-promulgated the entire asbestos NESHAP regulation to enhance enforcement and compliance, this is the most current edition. In June 17, 1994 the US EPA added appendix A to clarify the Asbestos NESHAP as it affects roof removal operations.

What Sources Are Covered by the Asbestos NESHAP?

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

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

The Toxic Substances Control Act (TSCA) first authorized the USEPA to regulate asbestos in schools, Public and Commercial buildings under the 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.

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 necessary.

The Asbestos NESHAP program in Arizona is enforced by the Federal, State, and Counties Asbestos NESHAP Coordinators. Maricopa, Pima and Pinal County have delegated authority from the USEPA to enforce the NESHAP within their respective jurisdictional boundaries, excluding tribal land. The Arizona Department of Environmental Quality Asbestos NESHAP Coordinator enforces the NESHAP in the other 12 Arizona counties. The Federal Asbestos NESHAP Coordinator, based out of U. S. EPA Region IX, San Francisco, has sole jurisdiction over all 25 tribal lands in Arizona.

The Pima County Department of Environmental Quality (PDEQ) has delegated authority from the USEPA to enforce the Asbestos NESHAP in Pima County. PDEQ's Asbestos NESHAP Coordinator, conducts inspections, investigates complaints, and collects demolition/renovation data within Pima County. PDEQ's Asbestos NESHAP Coordinator then submits a quarterly report to the EPA through the Asbestos Contractor Tracking System/National Asbestos Registry System (ACTS/NARS).

Written Notification Requirement

The Asbestos NESHAP, Section 61.145(b), requires a written notification for renovation and demolition operations. Only complete notification forms are acceptable. For NESHAP activities in Pima County, the notification should be hand printed or typewritten and postmarked or delivered to Pima County Department of Environmental Quality no later than ten working days prior to the beginning of the asbestos removal activity or demolition. The address is:

Pima County

Department of Environmental Quality	and send a copy to	ADOSH
Attn: Asbestos NESHAP Coordinator		800 W. Washington
130 W. Congress Street		Phoenix, AZ 85007
Tucson, AZ 85701-1317		

(520) 740-3360 **Note:** In addition to the NESHAP notification, Pima County requires an Asbestos Removal/Demolition Activity Permit and \$420.00 fee. NESHAP Notification Forms for Renovation and Demolition in Pima County are available at: www.deq.co.pima.az.us/permits/asbforms.htm

For NESHAP activities in Maricopa and Pinal counties, send the notification to:

Maricopa County

Department of Environmental Services	and send a copy to	ADOSH
Attn: Asbestos NESHAP Coordinator		800 W. Washington
1001 N. Central Avenue, Suite 300		Phoenix, AZ 85007
Phoenix, AZ 85004		
(602) 506-6742 (Call for fee information)		

Pinal County

Air Quality Control District	and send a copy to	ADOSH
Attn: Asbestos NESHAP Coordinator		800 W. Washington
PO Box 987		Phoenix, AZ 85007
Florence, AZ 85232		

(520) 868-6765 (Call for fee information)

Arizona Department of Environmental Quality

Attn: Asbestos NESHAP Coordinator and send a copy to
1110 W. Washington Street
Phoenix, AZ 85007

ADOSH
800 W. Washington
Phoenix, AZ 85007

(602) 771-2333 (No fee) 1-800-234-5677

All 25 tribal lands in Arizona are under the jurisdiction of the EPA. Send NESHAP Notification to.

The United States Environmental Protection Agency

Attn: Robert Trotter
Region IX NESHAP Coordinator (A-3-3)
75 Hawthorne Street
San Francisco, CA 94105

(415) 972-3989 (No fee)

NESHAP Notification Forms for Renovation/Demolition activities for all counties in Arizona may be located at The Asbestos Institute www.taiinfo.com or by contacting the respective NESHAP Coordinator.

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 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.

It is important to note that the Asbestos NESHAP regulation does not require facility owners to inspect the property unless a demolition or renovation is planned. AHERA, a federal regulation, requires general inspections which mandate that schools must be inspected for asbestos. However, all demolition projects must notify the delegated 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 coat 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

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, your employees, or 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 facility and home inspections, take samples of suspected material, assess its condition, and advise about what corrections are needed.

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.

Training centers in the Tucson and Phoenix metropolitan area conduct EPA approved training courses for asbestos professionals. AHERA accreditations are valid for a one year period. The building inspector must be currently accredited at the time of the inspection. The Pima County Department of Environmental Quality (PDEQ) publishes an environmental directory of companies in Pima County and the types of services provided. The information provided through PDEQ is supplied by the business listing the services. PDEQ in no way endorses, recommends or guarantees the regulatory compliance of any business or operation listed. It is the legal responsibility of each party to ask the asbestos professionals to produce documentation of their completion of a federally approved training course.

As of November 1991, the Asbestos NESHAP requires a person trained in the provisions of this rule and the means of complying with them to 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 RACM must be accredited. (*40 CFR, Part 61, Subpart M, §61.145(c)(8)*)

Although private homes are usually not covered by the same asbestos regulations that apply to schools and public buildings, professionals should still use federally approved procedures.

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). You may obtain the location an approved landfills near you by calling your respective NESHAP Coordinator.

The name and address of the approved waste disposal site nearest to Pima County is listed on the [NESHAP notification form](#)

The attached sections provide reference material on asbestos demolition/renovation topics and other activities

SECTION 1

NON-NESHAP FACILITIES

The demolition or renovations of residential or apartment buildings with four or fewer dwelling units are ordinarily not covered by the asbestos NESHAP. This includes single-family homes, duplexes, triplexes and quadplexes. This is true whether the demolition or renovation is performed by agents of the property owner or whether the demolition or renovation is performed by agents of the municipality. (*Federal Register, Vol 60 No. 145 Friday, July 28, 1995, Title 40, Code of Federal Regulation, Part 61*)

However, these structures become NESHAP facilities if any of the following applies:

- a. Renovation or demolition is under the control of a private owner or a government agency and involves more than one house on the same site;
- b. Renovation or demolition involving a single residence as part of a larger project;
- c. The residence or part of it, is currently being used, or was in the past used, for a business;
- d. The residence is part of a cooperative, company or military housing;
- e. Other residences or commercial buildings on the site are scheduled to be demolished in the future, as part of this project;
- f. The intentional burning of the residence.

NOTE₁: While certain demolitions or renovations performed by owners, operators and municipalities are not subject to the asbestos NESHAP, owners, operators and municipalities are encouraged to perform such demolitions or renovations in a manner that provides appropriate consideration for any potential adverse health impact to the public. Also, other Federal or State agency regulation may apply such as OSHA 29 CFR §1926.1101 Asbestos.

NOTE₂: 40 CFR §61.19 forbids owners and operators from attempting to circumvent any NESHAP applicable standards by carrying out an operation in a piecemeal fashion to avoid coverage by a standard that applies only to operations larger than a specified size.

RENOVATION OF A NESHAP FACILITY

To determine applicability of the NESHAP standards the owner or operator of a renovation activity must thoroughly inspect the affected facility or part of the facility where the renovation operation will occur for the presence of asbestos, including Category I and Category II nonfriable ACM prior to commencement of a demolition or renovation. Asbestos bulk sampling procedures are found in 40 CFR, Subpart E, Part 763.86.

Note: There is no waiver of the Asbestos NESHAP based on the date a structure is built. Therefore, All notification, inspection, and work practice standards mandated by the regulation must be followed regardless of the date the structure was built. (US EPA Letter of Clarification dated April 20, 1994)

The NESHAP requirements apply to each owner or operator of a renovation activity if the combined amount of RACM is:

- a. At least 260 linear feet on pipes;
- b. At least 160 square feet on other facility components; or
- c. At least 35 cubic feet of facility components where the length or area could not be measured previously.

2.1 Renovation With Less Than Regulated Amounts

At a NESHAP facility, removal of regulated asbestos containing material (RACM) below the EPA threshold amounts, and any amounts of Category I and Category II non-friable asbestos-containing material (ACM), is not subject to the asbestos NESHAP.

2.2 Renovation With Threshold Amounts At a NESHAP Facility.

Removal of asbestos containing material (RACM) at the EPA threshold amounts is a renovation under the asbestos NESHAP. This means that an owner or operator must:

- a. Submit a NESHAP notification to PDEQ ten (10) working days before any removal of RACM starts;
- b. Report all amounts of RACM to be removed and any amounts of Category I and II non-friable ACM; and
- c. Obtain a PDEQ Asbestos Removal/Demolition Activity Permit (\$420.00) before starting any removal.

Remove RACM following 40 CFR 61 procedures for asbestos emission control. Refer to §61.145(c).

Properly package and dispose of RACM following 40 CFR 61 standards for waste disposal and packaging. Refer to §61.150(a-c). Waste shipment records for RACM must conform to the requirements of 40 CFR §61.150(d).

DEMOLITION OF A NESHAP FACILITY

3.1 Demolition With Below the EPA Threshold Amounts

The owner or operator of a demolition activity, must thoroughly inspect the affected facility or part of the facility where the demolition operation will occur for the presence of asbestos, including Category I and Category II nonfriable ACM, prior to commencement of demolition. Asbestos bulk sampling procedures are found in 40 CFR, Subpart E, Part 763.86.

Note: There is no waiver of the Asbestos NESHAP based on the date a structure is built. Therefore, All notification, inspection, and work practice standards mandated by the regulation must be followed regardless of the date the structure was built. (US EPA Letter of Clarification dated April 20, 1994)

At a NESHAP facility being demolished, where RACM is present below the EPA threshold amounts, or even if there is no asbestos, the owner or operator must:

- a. Submit a NESHAP notification to PDEQ ten (10) working days prior to starting the demolition;
- b. Report all amounts of RACM to be removed prior to demolition and any amounts of Category I and II non-friable ACM that will be removed prior to demolition or will remain in place during demolition; and
- c. Obtain a PDEQ Asbestos Removal/Demolition Activity Permit (\$420.00) prior to starting demolition.

3.2 Demolition With the EPA Threshold Amounts

At a NESHAP facility being demolished, where RACM is present at the EPA threshold amounts the owner or operator must:

- a. Submit a NESHAP notification to PDEQ ten (10) working days prior to starting the demolition;
- b. Report all amounts of RACM to be removed prior to demolition and any amounts of Category I and II non-friable ACM that will be removed prior to demolition or will remain in place during demolition; and
- c. Obtain a PDEQ Asbestos Removal/Demolition Activity Permit (\$420.00) prior to starting demolition.

Refer to section 2.1 or 2.2, whichever applies, for proper removal and disposal of RACM.

Remove RACM following 40 CFR 61 procedures for asbestos emission control. Refer to §61.145(c).

Properly package and dispose of RACM following 40 CFR 61 standards for waste disposal and packaging. Refer to §61.150(a-c). Waste shipment records for RACM must conform to the requirements of 40 CFR §61.150(d).

ASBESTOS CEMENT (A/C PIPE)

4.1 Less Than 260 Linear Feet

The asbestos NESHAP regulations do not apply, unless the broken pieces produced when removing the pipe equal 35 cubic feet or greater and the pipe was not previously measured (Note: Asbestos contaminated soil is included in the 35 cubic feet) Refer to section 4.3 for RACM of 35 cubic feet or greater.

4.2 260 Linear Feet Or Greater

The NESHAP will apply if at least 260 linear feet of the asbestos containing (AC) pipe has been or will become RACM as defined at section 61.141.

To determine the 260 linear feet thresholds, measure only that portion of pipe that will be crushed, crumbled or pulverized or is actually crushed, crumbled or pulverized during the breaking or pulling apart of the pipe. If the debris is cleaned-up and the pipe is not contaminated or is decontaminated, then the bulk of the pipe may be disposed of as non-regulated. If not, the pipe must be considered contaminated, and the entirety is treated as asbestos-containing waste material. Removal of AC pipe is considered a renovation because the pipe is not a load bearing structural member.

If at least 260 linear feet of the pipe have become or will become **crushed, crumbled, or pulverized**, then the asbestos NESHAP regulations apply. **IMPORTANT:** Sources are not required to obtain an activity permit for activities involving asbestos cement pipe. However, such sources shall comply with all other local, state and federal requirements applicable to such materials. Compliance includes submission of a NESHAP notification to PDEQ and ADOSH as outlined in 40 CFR §61.145(b). (Ref 17.12.470F).

A/C pipe is normally classified as Category II non-friable ACM if it is in good condition. However, Category II non-friable ACM that has a high probability of becoming, or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation operation may cause it to be RACM under the NESHAP definition.

Workers doing transite pipe removal must follow work practice and engineering control for Class II work. (29 CFR 1926.1101(g)(8)(v)).

Training Requirements for Class II work must be the equivalent in curriculum, training method and length to the EPA Model Accreditation Plan (MAP) asbestos abatement workers training (40 CFR Part 763, subpart E, appendix C). Such courses must include "hands-on" training and should take at least 8 hours.

Transite pipe work practices and engineering controls are anything that keeps dust and contamination to a minimum. Such as using poly drop cloths, wet methods, high-efficiency particulate air (HEPA) equipped tools, and proper containment of the waste.

Transite pipe Work practices include:

- a. Adequately wet with amended water the immediate area of A/C pipe where cutting or disjoining will occur and until the exposed ends are properly sealed.
- b. Remove A/C pipe intact if possible. A/C pipe must be removed carefully so as not to damage the pipe, except for incidental breakage.
- c. Restrict cutting, abrading and breaking. Avoid dropping, throwing, sliding, or otherwise damaging the A/C pipe.
- d. Immediately bag or wrap removed pieces for transfer, place bagged or wrapped material in a closed receptacle by end of each shift. Seal areas that are damaged or exposed and broken ends by painting or packaging in leak-

- e. Each pipe wrapping or bag containing ACM must be labeled with the name and address of the location that generated the asbestos-containing material.
- f. Broken A/C pipes resulting from removal operations are considered RACM and must be adequately wet, at all times, and kept in leak-tight wrapping. The quantity of A/C pipe and RACM generated must be revised on the NESHAP notification to conform with §61.145(b)(2), if it changes by more than 20%.
- g. Undamaged A/C pipe with painted or plastic wrapped ends may be disposed as Category II non-friable ACM. RACM portions of A/C pipe must be adequately wet or packaged in leak-tight wrapping. RACM A/C pipe must be taken, as soon as practical, to an approved landfill.

Mark vehicles used to transport the A/C pipe waste during loading and unloading of waste so that the signs are visible. The markings must conform to the requirements of Sections 61.149(d)(1)(i), (ii), and (iii).

For Category II non-friable A/C pipe shipments, Pima County's Tangerine landfill manifest form is required if the waste is shipped to Tangerine landfill.

4.3 35 Cubic Feet Or Greater Of Broken A/C Pipe At a NESHAP Facility

Generation of 35 cubic feet or greater of broken A/C pipe, where the pipe length was not previously measured, is classified as removal of RACM and all the asbestos NESHAP requirements apply, which means, the owner or operator must:

- a. Submit a NESHAP notification ten (10) working days before starting any removal of A/C pipe;
- b. Report all amounts of A/C pipe to be removed and any amounts of RACM expected to be generated.

IMPORTANT: Sources are not required to obtain an activity permit for activities involving asbestos cement pipe. However, such sources shall comply with all other local, state and federal requirements applicable to such materials. (Ref 17.12.470F)

4.4 New Pipe (Not Installed)

A/C pipe that has not been installed and is in storage is generally classified as Category II non-friable ACM if the pipe is in good condition.

A/C pipe in storage should be in a secured area posted with warning signs.

A/C pipe that has deteriorated due to extensive weathering or has become significantly damaged due to poor storage or handling has become RACM.

Friable A/C pipe is pipe that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.

RACM must be properly disposed. Follow the NESHAP procedures for handling and disposing of A/C pipe that has become RACM:

- b. As soon as practical, seal the exposed damaged areas by painting or packaging in leak-tight wrapping;
- c. The entire pipe need not be wrapped if it has minimal damage, assuming that the entire pipe is not in poor condition;
- d. Label each wrap or bag with the name and address of the location that generated the asbestos-containing material.

Undamaged A/C pipe with painted or plastic wrapped ends may be disposed as Category II non-friable ACM. RACM portions of A/C pipe must be adequately wet and packaged in leak-tight wrapping and disposed at an approved landfill.

Mark vehicles used to transport the A/C pipe waste (RACM) during loading and unloading of waste so that the signs are visible. The markings must conform to the requirements of Sections 61.149(d)(1)(i), (ii), and (iii).

A/C pipe shipments must be manifested indicating the quantity of both CAT II non-friable ACM and RACM being shipped.

A/C pipe shipment records must conform to the requirements of Section §61.150(d). A Special Waste Manifest form must be used for RACM. For CAT II non-friable ACM, Pima County's Solid Waste Nonregulated Asbestos Disposal Manifest form is required if the waste is taken to Tangerine landfill.

ROOFING AND SIDING REMOVAL OPERATIONS

40 CFR, Part 61, Subpart M, Appendix A

5.1 Less Than 160 Square Feet

At a NESHAP facility, this is generally categorized as removal only of either Category I non-friable or Category II non-friable ACM, whichever applies.

The requirements under the NESHAP regulations do not apply, regardless of the removal method to be used, the type of material (Category I or II), or its condition (friable versus non-friable). However, the EPA recommends the use of methods that damage the roofing material as little as possible.

Note: If an entire roof system, including load-supporting beams, will be removed, under the NESHAP this is defined as a demolition. Therefore, the NESHAP notification for demolition applies.

5.2 160 Square Feet Or Greater Of Category II Non-Friable Asbestos Containing Roofing Material (ACRM) That Has or Will Become Friable ACRM

At a NESHAP facility, for asbestos cement (A/C) shingles or siding (or other Category II non-friable roofing material), where the removal methods will result in the material being crumbled, pulverized, or reduced to powder, the removal is classified as removal of RACM and all the NESHAP requirements apply. Also, Category II roofing or siding material that is already in a friable state is subject to the NESHAP.

Dropping shingles or siding from a building or scraping off of a building with heavy machinery would cause the shingles or siding to become RACM, therefore the owner or operator must:

- a. Submit a NESHAP notification to PDEQ (ten) 10 working day prior to starting any removal of A/C shingles or siding;
- b. Report all amounts of A/C shingles or siding to be removed;
- c. Obtain a PDEQ Activity Permit (\$420.00) prior to starting any removal of regulated A/C shingles or siding.

Adequately wet the A/C shingles or siding that have been crumbled, pulverized, or reduced to powder. As soon as practical after removal, seal or wrap in leak-tight wrapping.

The quantity of regulated A/C shingles or siding and RACM generated must be revised on the NESHAP notification if it changes by more than 20%.

Each bag must be labeled with the name and address of the location that generated the asbestos-containing material.

As soon as practical transport the regulated A/C shingles or siding to an approved landfill.

Mark vehicles used to transport the regulated A/C shingle or siding waste during loading and unloading of waste so that the signs are visible. The markings must conform to the requirements of Sections 61.149(d)(1)(i), (ii), and (iii).

A/C shingle or siding shipments must be manifested indicating the quantity of both CAT II non-friable ACM and RACM being shipped.

A/C shingle or siding shipment records must conform to the requirements of Section 61.150(d). The ADEQ Asbestos NESHAP Waste Shipment Record form may be used for RACM. For Category II non-friable ACM, Pima County's Tangerine Road landfill manifest is required.

under the NESHAP. Refer to section 5.3 for 160 square feet of Category II non-friable ACRM and A/C siding removal that is not or will not become friable.

5.3 160 Square Feet Or Greater Of Category II Non-Friable ACRM And A/C Siding That Is Not Or Will Not Become Friable

At a NESHAP facility, Category II non-friable ACRM, which includes A/C shingles, and Category II non-friable A/C siding is not regulated under the NESHAP if it does not become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

Category II ACRM (A/C shingles) and A/C sidings are typically nailed to buildings on which they are attached. The EPA believes that the extent of breakage that will normally result from carefully removing A/C shingles and siding and lowering the material to the ground will not result in crumbling, pulverizing or reducing the shingles or siding to powder. But by dropping the shingles or siding from a building or scraping off of a building with heavy machinery would cause the shingles or siding to become RACM. Therefore, removal of A/C shingles and siding that are not friable, using methods that do not crumble, pulverize, or reduce the material to powder (such as pry bars, spud bars and shovels to carefully pry the material), is not subject to the NESHAP provided that the A/C shingles and siding are properly handled during and after removal.

5.4 160 Square Feet Or Greater Of Category I Non-Friable Asbestos Containing Roofing Material (ACRM)

At a NESHAP facility, removal of Category I non-friable ACRM that has not become friable and will not be sanded, ground, cut, or abraded is not regulated under the asbestos NESHAP.

Category I ACRM includes asbestos-containing asphalt roofing products containing more than one percent asbestos. Asbestos Containing Material (ACM) roofing products that use other bituminous binders (such as coal tars or pitches) is also considered to be Category I ACRM.

5.5 160 Square Feet Or Greater Of Category I Friable ACRM

At a NESHAP facility, removal of Category I friable ACRM at 160 square feet or greater is categorized as renovation (removal of RACM) and all the requirements under the NESHAP apply.

Category I ACRM includes asbestos-containing asphalt roofing products containing more than 1% asbestos. ACM roofing products that use other bituminous binders (such as coal tars or pitches) are also considered to be Category I ACRM.

Category I non-friable ACRM that has extensively deteriorated, that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure has become friable ACM and is therefore RACM.

Category I non-friable ACRM that will be sanded, ground, cut, or abraded is also categorized as RACM.

Where a rotating blade (RB) cutter or similar equipment is used to remove asbestos-containing bituminous roofing material, the removal of 5580 square feet of that material will create 160 square feet of RACM. Therefore, all the following requirements apply for the removal of 5580 square feet of bituminous roofing material. Only the ACM debris produced as a result of using the RB cutter is RACM and must be handled and disposed properly. The undamaged roofing material remains Category I non-friable ACM and may be disposed as non-regulated ACM provided that the exposed cut ends are properly sealed. (Federal Register / Vol. 59, No. 116 / Friday, June 17, 1994 / Rules and Regulations for Appendix A to Subpart M -Interpretive Rule Governing Roof Removal Operations)

- a. Submit a NESHAP notification to PDEQ (ten) 10 working days prior to starting any removal of RACM;
- b. All amounts of Category I friable ACRM and RACM to be removed must be reported;
- c. Obtain a PDEQ Activity Permit (\$420.00) prior to starting any removal of RACM.

Adequately wet all RACM. As soon as practical after removal, seal or wrap in leak-tight wrapping.

The quantity of RACM generated must be revised on the NESHAP notification if it changes by more than 20%.

Each wrap or bag must be labeled with the name and address of the location that generated the asbestos-containing material. As soon as practical transport all RACM to an approved landfill that receives asbestos waste.

Mark vehicles used to transport the RACM waste during loading and unloading of waste so that the signs are visible. The markings must conform to the requirements of Sections 61.149(d)(1)(i), (ii), and (iii).

RACM shipments must be manifested indicating the quantity of both CAT II non-friable ACM and RACM being shipped.

RACM shipment records must conform to the requirements of Section 61.150(d). The ADEQ Asbestos NESHAP Waste Shipment Record form may be used for RACM. For Category II non-friable ACM Pima County's Tangerine landfill manifest is required.

VINYL ASBESTOS TILE (VAT) REMOVAL

6.1 Non-NESHAP Facility

Vinyl asbestos tiles are Category I nonfriable asbestos-containing material (ACM). The asbestos NESHAP does not apply to vinyl asbestos tiles (VAT) removal projects on single family homes or on residential buildings containing four or fewer dwelling units.

6.2 NESHAP Facility

- a. On a NESHAP facility, depending on the types of activities occurring, floor tiles and mastic may or may not be subject to the provisions of the asbestos NESHAP. Although not usually required by the asbestos NESHAP, removal of asbestos-containing resilient floor tiles may occur prior to demolition. If contractors carefully remove asbestos-cement material using tools that do not cause significant damage, the material is not considered RACM and can be disposed of with other construction debris.
- b. If contractors use cranes equipped with a wrecking ball, clamshell, bucket, hydraulic excavator, or use implosion/explosion techniques, asbestos-cement products will be crumbled, pulverized or reduced to powder and are subject to the provisions of the asbestos NESHAP.
- c. Additionally, the OSHA Construction Standard requires certain work practices and engineering controls for Class II work. All Class II work must be supervised by a competent person and HEPA vacuums, wet methods or wetting agents, and prompt clean-up and disposal of wastes and debris in leak-tight containers must be employed.
- d. An AHERA Certified Inspector must document that the VAT is NESHAP Category I ACM and an OSHA Competent Person must determine that the VAT is intact and will remain intact during the renovation or demolition. The definition of intact means the asbestos containing material has not crumbled, been pulverized, or otherwise deteriorated so that it is no longer likely to be bound within its matrix. The definition of negative initial exposure assessment (NEA) means a demonstration by the employer, which complies with the criteria of OSHA 29 CFR 1926.1101 paragraph (f)(2)(iii), that employee exposure during an operation is expected to be consistently below the permissible exposure limits (PELs).
- e. The Negative Exposure Assessment (NEA) is contingent on the following:
 - (1) Intact
 - (2) Worker Training
 - (3) Compliant Work Practices

6.3 Compliant Work Practices Include The Following:

- a. Vacuuming entire floor using a High Efficiency Particle Air (HEPA) unit;
- b. Using wet methods such as misting to control emissions, misting is not required for heat removal;
- c. Using hand removal methods only, such as metal floor tools;
- d. Ensuring VAT is substantially intact;
- e. Placing VAT debris in leak-tight waste containers;
- f. Mastic removal:

- (2) Wet sand at low speed or chemical removal
- g. The Negative Exposure Assessment (NEA) exempts the regulatory requirement for the following:
 - (1) Protective Clothing
 - (2) Air Monitoring
 - (3) Containment
 - (4) Respirators
 - (5) Decontamination
- h. Required job site inspection by the Competent Person:
 - (1) Prior to starting work, an OSHA Competent Person should conduct a negative exposure assessment.
 - (2) Upon employee request or upon condition change of the VAT, an OSHA Competent Person should determine the validity of the NEA.
- i. If extensive breakage renders the vinyl asbestos tile friable (non-intact) or mechanical chipping or bead blasting methods will be used, the provisions of the asbestos NESHAP apply: The owner or operator must:
 - (1) Submit a NESHAP notification ten (10) working day prior to starting or continuing any removal of VAT;
 - (2) Report all amounts of VAT to be removed and any amount of RACM expected to be generated in the NESHAP notification.
 - (3) Obtain a PDEQ activity permit (\$420)
 - (4) Comply with OSHA Class II work requirements;
 - (6) Comply with NESHAP RACM requirements.
- j. Mechanical chipping or bead blasting of VAT is allowed only in a negative pressure enclosure which meets OSHA and NESHAP regulatory requirements.
- k. Waste generated from VAT chipping and bead blasting must be disposed at a site operated in accordance with the NESHAP.

6.4 Sheet Vinyl Floor Covering in a NESHAP facility.

- a. Sheet vinyl with asbestos containing material only in the vinyl is consider Category I, non-friable asbestos. (*US EPA letter of clarification dated May 24, 1996*)
- b. Sheet vinyl containing more than 1% asbestos in the paper backing is considered regulated asbestos material (RACM). The sheet vinyl must be remove before demolition. The removal must follow all asbestos NESHAP work practice requirements. (*US EPA letter of clarification dated May 24, 1996*)

For removal of more than 160 square feet of sheet vinyl containing more than 1 % asbestos as determined using polarized light microscopy according to the method specified in Appendix A, Subpart F, 40 CFR Part 763. Section 1, Polarized Light Microscopy:

The owner or operator must:

- (1) Submit a NESHAP notification ten (10) working day prior to starting or continuing any removal of sheet vinyl floor.
- (2) Report all amounts of VAT to be removed and any amount of RACM expected to be generated in the NESHAP notification.
- (3) Obtain a PDEQ activity permit (\$420)
- (4) Waste generated from sheet vinyl floor removal must be disposed at an approved landfill.

ASBESTOS BULK SAMPLING PROCEDURES

40 CFR, Part 763 Subpart E, 763.86

7.1 Surfacing material.

An accredited inspector shall collect, in a statistically random manner that is representative of the homogeneous area, bulk samples from each homogeneous area of friable surfacing material that is not assumed to be ACM, and shall collect the samples as follows:

- a. At least three bulk samples shall be collected from each homogeneous area that is 1,000 ft² or less.
- b. At least five bulk samples shall be collected from each homogeneous area that is greater than 1,000 ft² but less than or equal to 5,000 ft².
- c. At least seven bulk samples shall be collected from each homogeneous area that is greater than 5,000 ft².

7.2 Thermal system insulation.

- a. An accredited inspector shall collect, in a randomly distributed manner, at least three bulk samples from each homogeneous area of thermal system insulation that is not assumed to be ACM.
- b. Collect at least one bulk sample from each homogeneous area of patched thermal system insulation that is not assumed to be ACM if the patched section is less than 6 linear or square feet.
- c. In a manner sufficient to determine whether the material is ACM or not ACM, collect bulk samples from each insulated mechanical system that is not assumed to be ACM where cement or plaster is used on fittings such as tees, elbows, or valves.
- d. Bulk samples are not required to be collected from any homogeneous area where the accredited inspector has determined that the thermal system insulation is fiberglass, foam glass, rubber, or other non-ACBM.

7.3 Miscellaneous material.

In a manner sufficient to determine whether material is ACM or not ACM, an accredited inspector shall collect bulk samples from each homogeneous area of friable miscellaneous material that is not assumed to be ACM.

7.4 Nonfriable suspected ACBM.

If any homogeneous area of nonfriable suspected ACBM is not assumed to be ACM, then an accredited inspector shall collect, in a manner sufficient to determine whether the material is ACM or not ACM, bulk samples from the homogeneous area of nonfriable suspected ACBM that is not assumed to be ACM.

PROCEDURES FOR ACM DAMAGED BY FIRE AND RACM NOT REMOVED BEFORE DEMOLITION

8.1 ACM Involved in a Fire

If asbestos containing materials (ACM) are present after a regulated source has caught on fire, the Asbestos NESHAP must be followed. This would include the removal of any ACM prior to demolition or renovation that would disturb the material if the source is structurally sound. This would also include the removal of Categories I and II materials which have been rendered friable or in poor condition by the fire. If the building has been determined to not be structurally sound and abatement cannot occur, the NESHAP allows for emergency procedures which include a wet demolition of the structure without the removal of asbestos. Regardless of the building's condition, disposal requirements must be met. (Ref: U.S. EPA Asbestos NESHAP Applicability Determination, Letter dated November 24, 1992)

8.2 Procedures for Demolition by Fire or Fire Department Practice Burn

All structures that are regulated by the NESHAP must have all ACM removed prior to demolition by burning or for fire department practice burns. Ref: 40 CFR Part 61, Subpart M §61.145(c)(10)

8.3 Procedures For Demolition of Facilities Where the RACM Is Not Removed Prior to Demolition,

Because:

- a. it is Category I nonfriable ACM that is not in poor condition and is not friable, or
- b. it is on a facility component that is encased in concrete or other similarly hard material and is adequately wet when exposed during demolition, or
- c. it was not accessible for testing and was, therefore, not discovered until after demolition began and, as a result of the demolition, the material cannot be safely removed, or
- d. they are Category II nonfriable ACM and the probability is low that the materials will become crumbled, pulverized, or reduced to powder during demolition, or
- e. facilities demolished under an order of a State or local government agency because the facility is structurally unsound and in danger of imminent collapse, adequately wet asbestos-containing waste material during the demolition and at all times after demolition.

Keep the material adequately wet during handling and loading for transport to a disposal site. If not removed for safety reasons, the exposed RACM and any asbestos-contaminated debris must be treated as asbestos-containing waste material and adequately wet at all times until disposed of.

Asbestos-containing waste materials covered under the above conditions (8.3 a through e) do not have to be sealed in leak-tight containers or wrapping but may be transported and disposed of in bulk. (Ref: 40 CFR Part 61, Subpart M, §61.150(a)(3).

Note: Before an owner or operator transports asbestos containing waste materials in bulk to an approved waste site, the owner or operator must establish and account with the landfill operator and obtain a profile number.

PROCEDURES FOR ORDERED DEMOLITION

9.1 On a facility being demolished under an order of a state or local government agency, follow these procedures:
§61.145(a)(3)

a. Determine if it is a NESHAP facility? 61.141 Definitions.

Facility means any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excluding residential buildings having for or fewer dwelling units); any ship and any active or inactive waste disposal site. For the purposes of this definition, any building, structure or installation that contains a loft used as a dwelling is not considered a residential structure, installation, or building. Any structure, installation or building that was previously subject to this subpart is not excluded, regardless of its current use or function.

The residential exemption does not apply where multiple residential buildings on the same site are demolished as part of a larger project that includes demolition of non residential buildings . *Federal Register, Vol 60 No. 145 Friday, July 28, 1995, Title 40, Code of Federal Regulations, Part 61 [frl-5286-2]*

b. Was the order made by a qualified state or local governmental agency?

9.2 **On a structurally sound facility**, follow these procedures:

a. Thoroughly inspect the facility for the presence of regulated asbestos containing materials.

- (1) Does any samples contain more than 1% asbestos?
- (2) Is the total amount of material containing greater than 1% and above the threshold amount?
- (3) If above the EPA threshold amount:
 - (i) Provide a NESHAP notification to PDEQ prior to the renovation.
 - (ii) Obtain a PDEQ NESHAP renovation permit
 - (iii) Remove all RACM
 - (iv) Obtain a PDEQ NESHAP permit prior to demolition
- (4) If below the EPA threshold amount, provide a NESHAP notification and obtain a PDEQ NESHAP permit prior to demolition.

9.3 **On a structurally unsound facility** (in imminent danger of collapse), follow these procedures:

If not possible to inspect, provide a NESHAP notification, obtain a PDEQ NESHAP demolition permit, demolish the facility while keeping it adequately wet and then inspect the debris for RACM.

- (1) Does the debris contain any amount of RACM?
- (2) If the debris contain asbestos, can the RACM be isolated from the rest of the debris?

- (4) Sites that have not removed the RACM prior to demolition will need a site assessment to determine if the immediate area surrounding the demolition site has been contaminated.
- (5) If the area surrounding the demolition site is contaminated, the area must be decontaminated, to include contaminated soil.

9.3 If an owner or operator of a facility that was not previously inspected can demonstrate, through records, blue prints, etc, that the debris does not contain RACM, then the disposal requirements of the NESHAP may not apply

9.4 Demolition by intentional burning: The Asbestos NESHAP requires the removal of all ACM if a facility will be demolished by intentional burning. This requirement includes the removal of all Category I and Category II nonfriable ACM which for the purposes of intentional burning shall always be considered RACM. (61.145(c)(10))

Note: The Asbestos NESHAP does not allow demolition by intentional burning on structurally unsound facilities.

LIST OF U. S. EPA ASBESTOS NESHAP NOTICES OF CLARIFICATION

The Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 61, Subpart M, was amended on November 20, 1990 by the U. S. Environmental Protection Agency (EPA) to increase the level of compliance with the demolition and renovation provisions.

In order to assist the public and regulated community to understand the requirements under the Asbestos NESHAP, a series of Letters of Clarification, Memos, and Federal Registers were published. Below is a partial list of these documents in the order of date of release. These clarifications do not supercede, alter, or in any way replace the existing Asbestos NESHAP. These documents are intended solely as guidance and do not represent an action subject to judicial review under section 307(b) of the Clean Air Act or section 704 of the Administrative Procedure Act.

<u>Date of Release</u>	<u>Type</u>	<u>Subject</u>
Oct 26, 1982	Memo	Fabrication - Brake Pads
Jun 12, 1990	Letter	Roofing - Cutting
Nov 1990	Guide	Reporting and Record Keeping Requirements for Waste Disposal
Dec 1990	Guide	Asbestos/NESHAP Regulated Asbestos Containing Materials Guidance
Jan 1991	Guide	Implementation Strategy for Revised Asbestos NESHAP
Jan 8, 1991	Letter	Floor Tile Removal - Infrared Heaters
Mar 29, 1991	Letter	Floor Tile Removal - Shot Blasting
Apr 15, 1991	Letter	Roofing Felt; Mastic; Demolition Notice & Procedures
May 2, 1991	Memo	Facility Components - Covered or Coated with Settled ACM Dust
May 8, 1991	Memo	Point Counting to Quantify Asbestos in Samples when Below 10%
May 20, 1991	Letter	Asbestos Gaskets - NESHAP Applicability
Jun 1, 1991	Memo	Asbestos Waste Disposal Sites within EPA Region IX
Jun 14, 1991	Letter	Laundering of Asbestos Contaminated Clothing
Jun 19, 1991	Letter	Tile; Mastic; Point Counting; Friability Determinations
Jun 25 1991	Letter	Residential Structures; Waste Shipment Records; Disposal
Jul 17 1991	Letter	Notice Required: All Demos; Renos with Threshold Amounts of RACM
Jul 17 1991	Letter	Crushing of Excavated Asbestos Cement Pipe
Jul 19, 1991	Letter	EPA Policy to Sue Owners and Operators in Asbestos Cases
Aug 20 1991	Letter	EPA Policy to Sue Owners and Municipalities in Asbestos Cases
Sep 12 1991	Fedreg	Training Requirements
Sep 18 1991	Letter	Removing Large Facility Components with RACM
Oct 9, 1991	Letter	Defining Asbestos Cement Pipe as a NESHAP Facility Component
Oct 22, 1991	Letter	Removal of Transite Material Prior to Demolition/LTV Steel Mill
Oct 28, 1991	Letter	Demolition by Intentional Burning - Remove all ACM Prior To Demo
Nov 5, 1991	Letter	Purpose of 10-Working Day Wait Period for Notification Submittal
Jan 8, 1992	Letter	When Does Damaged Nonfriable Transite Material Become Regulated
Jan 8, 1992	Letter	Waste Handling - Multiple Small Removal Projects
Feb 4, 1992	Letter	Demolition - Facility Definition and Residential Buildings
Mar 18, 1992	Letter	Category I & II - Wetting and Disposal Requirements
Mar 29, 1992	Letter	Classification of Tar Coated Pipe Wrap as Category II ACM
Apr 14, 1992	Letter	Waste Glass Recycling with Small Amounts of Chrysotile Asbestos
May 29, 1992	Letter	Pipe Wrap Coating - Category I or II ACM
Jul 31, 1992	Letter	ACM Mastics and Sealants for Fiberglass, Pipe and Duct Insulation
Sep 1992	Guide	A Guide to Normal Demolition Practices Under the Asbestos NESHAP
Sep 4, 1992	Letter	Joint Compound/Tape; Composite Analysis Allowed on Wall Systems
Sep 16, 1992	Letter	Waste Disposal Site - Record Keeping Requirements
Oct 5, 1992	Letter	Notification for Several Small Projects; Demo vs Renovation
Oct 29, 1992	Letter	Economic Benefit Study - U.S. EPA Region IX

Nov 3 1992	Letter	Notification - Courtesy vs Official
Nov 6, 1992	Letter	Residential - Definition as a Facility
Nov 6, 1992	Memo	Roadway Standard for Mine Tailings
Nov 23, 1992	Memo	Notification Revisions - EPA Penalty
Nov 24, 1992	Letter	Start & End Dates; Wetting; Fire; Negative Air
Nov 30, 1992	Letter	Transite Pipe - Calcium Silicate Pipe Lagging - Friable
Dec 4, 1992	Letter	ASHARA Extension to Commercial/Public Buildings Effective 11/28/92
Dec 7, 1992	Letter	California Building Departments - Required to Know NESHAP Regs
Dec 21, 1992	Letter	LTV Steel Mill - Removal of Transite Panels for Roof Prior to Demo
Dec 28, 1992	Letter	Drop-Ceiling Tiles with Fireproofing RACM Dust/Debris
Jan 4, 1993	Letter	Demo and Renovation Notices - Who Must File
Jan 4, 1993	Letter	Asbestos Containing Paint - Normally Nonfriable During Demolition
Jan 14, 1993	Letter	Joint Compound; Transite; Window Putty
Jan 25, 1993	Memo	Applicability Thresholds; Previously Fallen ACM
Jan 28, 1993	Letter	Waste Disposal - Labeling
Feb 3, 1993	Letter	Notification - Start Dates and Change of Start/Stop Dates
Feb 3, 1993	Letter	Residential - Definition of Facility
Feb 5, 1993	Letter	Notification - Annual; Demo vs Reno
Feb 26, 1993	Letter	RACM - Leaving/missing some
Jun 9, 1993	Letter	HVAC Tape - Friable During Course of Demolition
Jun 24, 1993	Letter	Roofing - Proposed Interpretive Rule
Jun 25, 1993	Letter	Bulk Sampling Methods To Determine If >1% ACM
Jul 1, 1993	Letter	Duct Tape - How To Measure Length
Jul 15, 1993	Letter	Demolition of Residential Dwellings by the City for Public Safety
Jul 20, 1993	Letter	County Building Inspectors - Fact Sheet for Public Handouts
Aug 4, 1993	Letter	State Districts - Notice to Comply Not Appropriate Action for NESHAP
Aug 24, 1993	Letter	Sampling Scheme for Determining if Plaster is >1% ACM
Oct 5, 1993	Fed Reg	Asbestos NESHAP Clarification of Intent - NESHAP Requirements
Oct 22, 1993	Letter	Sampling Building Materials for NESHAP Compliance
Nov 15, 1993	Letter	Wrecking or Displacement of Load-Supporting Structural Members
Nov 30, 1993	Letter	EPA/State Enforcement Actions
Dec 16, 1993	Letter	Landfill Activities that Convert ACM to RACM
Jan 5, 1994	Fed Reg	Asbestos NESHAP Clarification - Analysis of Multi-Layered Systems
Jan 13, 1994	Letter	Sheetrock Mud - Wall Systems Troweled or Stippled With ACM
Feb 3, 1994	Fed Reg	Asbestos Model Accreditation Plan; Interim Final Rule
Feb 10, 1994	Letter	Denial of Entry to NESHAP Inspectors - Procedures/Training
Mar 3, 1994	Letter	Manufacture of Diaphragm-Anode Assemblies - NESHAP Applicability
Feb 17, 1994	Letter	Non-Profit Agencies Renovating or Demolishing Single-Family Homes
Apr 20, 1994	Letter	Recently Built NESHAP Facilities - No Waiver On Date Built
Jun 1, 1994	Letter	Composite Sampling of Sheetrock Joint Compound; Salvage Operations
Jul 28, 1994	Letter	Floor Tile - Extensive Breakage; Contact State/Local NESHAP Agency
Jun 17, 1994	Fed Reg	Appendix A to Subpart M - Interpretive Rule; Roof Removal Operations
Sep 30, 1994	Bulletin	Asbestos sampling- supplementary guidance
Oct 12 1994	Letter	Removal of AC Pipe at Public Rights-of-Way and Private Property
Jan 17, 1995	Letter	Analysis of Each Layer of Multi-Layer Systems for Asbestos Content
Apr 4, 1995	Letter	TSCA Assistance Information Service - Asbestos Related Documents
Jun 9, 1995	Letter	Applicability of the NESHAP to Residential Structures >4 Dwellings
Jul 28, 1995	Fed Reg	Demolition of isolated small residential building by any entity
Dec 6, 1995	Letter	Removal of asbestos in the home
Jan 31, 1996	Letter	Removal of floor tile mastic
May 24, 1996	Letter	Sheet vinyl floor covering

Oct 3, 1996	Letter	Asbestos containing mastic
Mar 24, 1996	Letter	Bridges regulated under the NESHAP
Oct 15, 1997	Letter	Operations and Maintenance activities (O& M)
Jun 22, 1998	Letter	Measurement of duct tape in square feet

For more information contact

Pima County Department of Environmental Quality
Asbestos NESHAP Coordinator
130 W. Congress Street
Tucson, AZ 85701
(520) 740-3360