

# Significant Changes in the Asbestos Standard for Construction 29 CFR 1926.1101

This handout is designed to acquaint interested persons with significant changes to OSHA's new Asbestos Standard for Construction, 29 CFR 1926.1101. It is not intended to be a comprehensive review of the entire standard. Persons who wish to learn more about the specific provisions of the standard should consult the preamble and regulatory text of the standard as published in the Federal Register.

The issues that are discussed here are the Permissible Exposure Limit (PEL); duties of building/facility owners; duties and training of the competent person; aspects of exposure monitoring; and control measures, especially for the 4 classes of asbestos work defined by the standard. Basic definitions that are important to understanding these issues are presented.

## **Definitions**

*Asbestos-Containing Material (ACM)* - means any material containing more than one percent asbestos.

*Presumed Asbestos-Containing Material (PACM)* - means thermal system insulation and surfacing material found in buildings constructed no later than 1980. The designation of a material as "PACM" may be rebutted following procedures specified in the standard.

*Surfacing ACM* - means material that is sprayed, troweled-on or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes) and that contains more than 1% asbestos.

*Thermal System Insulation (TSI) ACM* - means ACM applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain and that contains more than 1% asbestos.

*Class I Asbestos Work* - means activities involving the removal of TSI and surfacing ACM and PACM.

*Class II Asbestos Work* - means activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

*Class III Asbestos Work* - means repair and maintenance operations, where "ACM," including TSI and surfacing ACM and PACM, may be disturbed.

*Class IV Asbestos Work* - means maintenance and custodial construction activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II and III activities.

**NOTES:**

1. The removal of intact cements, coatings, mastics, and flashings during roofing work is not covered by the class system.
2. The installation of asbestos-containing products is covered by the standard but does not fall into any of the four classes.

*Building/Facility Owner* - means the legal entity, including a lessee, which exercises control over management and recordkeeping functions relating to a building and/or facility in which activities covered by this standard take place.

**Permissible Exposure Limit (PEL)**

The time-weighted average (TWA) permissible exposure limit has been reduced to 0.1 fibers per cubic centimeter. The Excursion Limit remains at 1.0 fibers per cubic centimeter averaged over 30 minutes. Both of these values are considered PELs.

There is no established action level in the new standard because the sampling and analytical method is not reliable below the time-weighted average limit of 0.1 fibers per cubic centimeter.

**Requirements for Building/Facility Owners**

Most asbestos-related construction activities involve previously installed building materials. Building owners often are the only and/or best sources of information concerning them. Therefore they are assigned specific information conveying and retention duties under the new asbestos standard. Where a building/facility owner also is an employer with employees who may be exposed to asbestos-containing materials, the duties of employers also apply.

The following materials must be treated as asbestos-containing, unless specified procedures are followed to determine otherwise:

- TSI and surfacing materials in buildings or substrates constructed no later than 1980
- Asphalt and vinyl flooring material installed not later than 1980
- Any other materials that the building owner has actual knowledge that it is, or should have known it to be, asbestos-containing

*Notification Requirements*

Before work is begun, building/facility owners must identify the presence, location, and quantity of ACM/PACM and notify the following persons:

- Prospective employers applying for or bidding for work whose employees reasonably can be expected to work in or adjacent to areas containing such material
- Employees of the owner who will work in or adjacent to areas containing such material
- On multi-employer worksites, all employers of employees who will be performing work within or adjacent to areas containing such materials
- Tenants who will occupy areas containing such materials

Notification may be in writing or by personal communication to the affected person(s) or their authorized representatives.

NOTE: When materials labeled as containing asbestos according to the requirements of this standard are installed on non-residential roofs, the contractor must notify the building owner of the presence and location of such asbestos-containing materials. This facilitates the owner's future notification requirements.

### *Signs and Labels*

Building/facility owners must post signs at the entrance to mechanical rooms/areas in which employees reasonably can be expected to enter and which contain TSI and surfacing ACM/PACM. The signs must identify the material which is present, its location, and appropriate work practices that will ensure ACM/PACM will not be disturbed.

Previously installed PACM/ACM that is identified by a building owner or employer must be labeled in areas where the label will clearly be noticed. Posting of signs may be used as an alternative to labels.

The wording for labels is

DANGER  
CONTAINS ASBESTOS FIBERS  
AVOID CREATING DUST  
CANCER AND LUNG DISEASE HAZARD

Labels must also contain a warning statement against breathing asbestos fibers.

### *Records Retention*

Where a building/facility owner has communicated and/or received notification concerning the identification, location, and quantity of ACM/PACM, written records of such notifications and their content must be maintained by the building owner for the duration of ownership and transferred to successive owners.

Where a building/facility owner has relied on data to demonstrate that PACM is not asbestos-containing, such data must be maintained for as long as they are relied upon to rebut the presumption.

### **Competent Person**

The new standard requires that a competent person be designated for *all* worksites covered by the standard. The competent person must have the qualifications and authority required by 29 CFR 1926.20-32, the basic construction requirements.

The standard specifies additional duties and training for the competent person on asbestos worksites.

## *Duties*

The competent person must make frequent and regular inspections of the job site, materials, and equipment. On jobsites where Class I or II work is being performed, the competent person must perform or supervise the following duties:

- Set-up the regulated area, enclosure, or other containment
- Ensure (by on-site inspection) the integrity of the enclosure or containment
- Set up procedures to control entry to and exit from the enclosure and/or area
- Supervise all employee exposure monitoring
- Ensure that employees working within the enclosure and/or using glove bags wear protective clothing and respirators
- Ensure through on-site supervision, that employees set up and remove engineering controls, use work practices and personal protective equipment in compliance with all requirements
- Ensure that employees use the hygiene facilities and observe the decontamination procedures
- Ensure through on-site inspection that engineering controls are functioning properly and employers are using proper work practices
- Ensure that notification requirements are met

For Class I jobs, on-site inspections must be made at least once during each work shift, and at any time at employee request.

For Class II and III jobs, on-site inspections must be made frequently enough to assess whether conditions have changed, as well as at any reasonable time at employee request.

## *Training*

For Class I and II asbestos work, training of the competent person must include all aspects of asbestos removal and handling, including:

- abatement, installation, removal, and handling
- contents of the standard
- identification of asbestos
- removal procedures, where appropriate
- other practices for reducing the hazard

This training will be obtained in a comprehensive course for supervisors that meets the criteria of EPA's Model Accreditation Plan (40 CFR Part 763), or a course equivalent in stringency, content, and length.

For Class III and IV, training of the competent person must include aspects of asbestos handling appropriate to the work, including:

- procedures for setting up glove bags and mini-enclosures
- use of wet methods
- contents of the standard
- identification of asbestos

Training must include successful completion of a course meeting EPA requirements for training local education agency maintenance and custodial staff [40 CFR 763.92(a)(2)], or its equivalent in stringency, content, and length.

Training required for Class I and II competent persons also satisfies the requirements for Class III and IV.

## Exposure Monitoring

### *Initial Exposure Assessment*

A competent person must make an "initial exposure assessment" before or at the initiation of all covered operations to determine expected exposures. An initial exposure assessment is not the same as initial exposure monitoring. Initial employee exposure monitoring cannot adequately predict all future exposures on construction jobs. First-day exposures may reflect set-up activities and thus be lower than later exposures. In addition, results of monitoring are not instantaneously available. Therefore, the initial exposure assessment will identify jobs likely to exceed the PEL in time for employers to install and implement the extra controls required to reduce exposures.

The bases for the initial exposure assessment are:

- 1) Employee exposure monitoring, if feasible, and
- 2) All observations, information, or calculations that indicate employee exposure to asbestos; this includes any previous monitoring conducted in the workplace, or of the operations of the employer that indicate the levels of airborne asbestos likely to be encountered on the job.

For Class I jobs, exposures are to be assumed to exceed the PELs until and unless the employer is able to make a "negative exposure assessment."

If a "negative exposure assessment" has been made, the "initial exposure assessment" is not required.

### *Negative Initial Exposure Assessment*

A "negative initial exposure assessment" is a demonstration by the employer that employee exposure during an operation is expected to be consistently below the PELs.

The determination of a "negative exposure assessment" is job-specific. It can apply only to jobs performed by *trained* employees.

An employer may demonstrate that exposure will be below the PELs by data conforming to the following criteria:

- 1) Objective data - demonstrating that the product or material containing asbestos minerals or the activity involving such product or material cannot release airborne fibers in concentrations in excess of the PELs (TWA or Excursion Limit) under those work conditions having the greatest potential for releasing asbestos (the worst case), or
- 2) Prior exposure monitoring results - for both PELs; within the previous 12 months; using the sampling and analytical methods of the asbestos standard in effect; work operations closely resemble current or projected operations in terms of processes, types of material, control methods, work practices, environmental conditions, *and employee training*; results indicate that employee exposures will not exceed PELs, or
- 3) Results of initial exposure monitoring of the current job - cover operations that are most likely during the performance of the entire asbestos job to result in exposures over the PELs.

## *Periodic Monitoring*

Daily monitoring is required for Class I and II operations unless the employer has made a negative exposure assessment for the entire operation.

For Class I work, daily monitoring may be dispensed with only if all employees are equipped with supplied-air respirators operated in the pressure demand mode (or other positive pressure mode respirator) *and* only control methods listed in the standard are used.

For Class II work, daily monitoring may be dispensed with if all employees are equipped with supplied-air respirators operated in the positive-pressure mode.

All work operations, other than Class I and II work, where exposures are expected to exceed a PEL, must be monitored at intervals sufficient to document the validity of the exposure prediction.

## **Methods of Compliance**

Some methods of compliance specified in the new standard apply to all covered asbestos jobs. Others are Class-specific.

### *Requirements Applying to All Jobs*

Controls and practices that must always be used, *regardless of the level of exposure*, are

- 1) Vacuum cleaners with HEPA filters to collect asbestos-containing debris and dust
- 2) Wet methods or wetting agents during handling, mixing, removal, cutting, application, and clean-up (unless infeasible or creates a greater hazard) - see paragraph (g)(8)(ii) for roofing exceptions
- 3) Prompt clean-up and disposal of wastes and debris contaminated with asbestos in leak-tight containers

Controls and work practices that may *never* be used, *regardless of the level of exposure*, are

- 1) High-speed abrasive disc saws that are not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air
- 2) Compressed air to remove asbestos-containing materials, unless used in conjunction with an enclosed ventilation system to capture the dust cloud
- 3) Dry sweeping, shoveling or other dry clean-up of dust and debris containing ACM and PACM
- 4) Employee rotation to reduce employee exposure

For all work covered by the standard, one or more of the following controls must be used, as necessary, to achieve compliance with the PELs:

- Local exhaust ventilation equipped with HEPA filter dust collection systems
- Enclosure or isolation of processes producing asbestos dust

- Ventilation of the regulated area to move contaminated air away from the employee's breathing zone to a filtration or collection device equipped with a HEPA filter
- Other work practices and engineering controls that the Assistant Secretary for OSHA can show to be feasible.

NOTE: Where the above controls are not sufficient to achieve compliance with the PELs, they must still be used and then supplemented with respiratory protection.

**Requirements Applying to Specific Classes of Asbestos Work**

Requirements for controls and work practices that apply to a specific Class or type of asbestos work are found in the sections of the Standard as indicated in the following table:

<b>Class or Type of Asbestos Work</b>	<b>Paragraph of the Standard</b>
Class I Requirements	(g)(4) (g)(5) (g)(6)
Class II Requirements	(g)(7) (g)(8)
Class III Requirements	(g)(9)
Class IV Requirements	(g)(10)
Installing, removing, repairing, or maintaining intact pipeline asphaltic wrap	(g)(11)
Installing, removing, repairing, or maintaining intact roof flashings which contain asbestos fibers encapsulated or coated by bituminous or resinous compounds	(g)(11)

**UNITED STATES  
DEPARTMENT OF LABOR**

Occupational Safety & Health Administration  
 200 Constitution Ave NW  
 Washington, DC 20210  
 ☎ 800-321-6742 (OSHA)  
 TTY  
[www.OSHA.gov](http://www.OSHA.gov)

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