ASBESTOS AWARENESS AND EXPOSURE PROGRAM

PURPOSE / SCOPE

Asbestos-containing building materials are present on many of our job sites. If the building was built, or the material installed before 1980, asbestos-containing materials may be present. In addition to the potential health hazards of improper handling of asbestos, severe civil and criminal penalties may be imposed on both companies and individuals involved in illegal handling of asbestos materials.

Only trained and qualified individuals are authorized to inspect, sample, repair and perform housekeeping duties around asbestos containing materials. When Winger Companies', herein referred to as Winger, scope of work involves asbestos abatement, a properly trained or certified contractor will be commissioned to conduct the asbestos abatement. The following sections summarize the basic requirements of OSHA 1926.58.

DEFINITION

Asbestos is the generic term for a group of naturally occurring silicate minerals used commercially for their desirable physical properties. They are fibrous minerals with high tensile strength, flexibility, and resistance to heat, chemicals, and electricity. Asbestos is a widely used, mineral-based material that is resistant to heat and corrosive chemicals. Depending on the chemical composition, fibers may range in texture from coarse to silky.

Asbestos became increasingly popular among manufacturers and builders in the late 19th century because of its sound absorption, average tensile strength, its resistance to fire, heat, electrical and chemical damage, and affordability. It was used in such applications as electrical insulation for hotplate wiring and in building insulation. When asbestos is used for its resistance to fire or heat, the fibers are often mixed with cement (resulting in fiber cement) or woven into fabric or mats.

Asbestos mining began more than 4,000 years ago, but didn't start large scale until the end of the 19th century. The world's asbestos mining peaked around 1975, when asbestos was being mined in some 25 countries, but is today less than half of what it was in the mid-1970s. For a long time, the world's largest asbestos mine was the Jeffrey mine in the town of Asbestos, Quebec.[4]

For the purposes of OSHA Standard 1926.58, asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

DANGERS OF ASBESTOS EXPOSURE

Asbestos fibers are carried into the body as airborne particles. The fibers can become embedded in the tissues of the lung and digestive system. Once the fibers become trapped in the lung's alveoli (air sacs), they cannot be removed. Years of exposure to asbestos have caused a number of disabling and fatal diseases. Symptoms of these diseases generally do not appear for 20 or more years after initial exposure. Among these diseases are:

- **Asbestosis** - an emphysema-like condition lung cancer,
- **Mesothelioma** - a cancerous tumor that spreads rapidly in the cells of the membranes covering the lungs and body organs.
- **Gastrointestinal cancer** - caused by ingesting asbestos-contaminated food.

EXPOSURE LIMITS

The **Permissible Exposure Limit (PEL)** for airborne asbestos is 0.1 fibers per cubic centimeter (0.1 f/cc) as an 8-hour, time weighted average (TWA).

The **Excursion Limit (Short Term Limit)** for airborne asbestos is 1.0 fibers per cubic centimeter as an average during a 30-minute period of time.

The **Action Level** for airborne asbestos is 0.1 fibers per cubic centimeter based on an 8-hour, time-weighted average. This is the level of exposure that triggers the monitoring, medical and training requirements of OSHA Standard 1926.58.

DETERMINATION OF ASBESTOS / NON-ASBESTOS

Because very few asbestos-containing fibers are being installed today, most worker exposures occur during the removal of asbestos and the renovation and maintenance of buildings and structures containing asbestos. Any insulation of unknown composition must be handled as if it were asbestos until it has been tested to confirm that is not asbestos.

All suspect insulation must be evaluated to determine whether asbestos is present. The State of Iowa requires that a person certified by the State as an Asbestos Evaluation Specialist perform the inspection. This person is responsible for obtaining the samples necessary to make determination of whether or not asbestos is present.

The sample is not to be taken when other persons are in the immediate area unless they are also wearing personal protective equipment (PPE). PPE shall include, but not limited to, coveralls, gloves, head coverings, foot coverings, face shields & vented goggles.

The personal protective equipment (PPE) required includes:

- A half-mask respirator with HEPA cartridges as the minimum respiratory protection is required.
- Tyvek coveralls and gloves.

After the sample is taken, the sample area needs to be covered with mastic or duct tape, depending on the surfaces to be covered.

MONITORING – OSHA STANDARD 1926.58 (F)

Employers who have a workplace or work operation covered by this Standard must perform initial monitoring to determine the airborne concentrations of asbestos to which employees may be exposed.

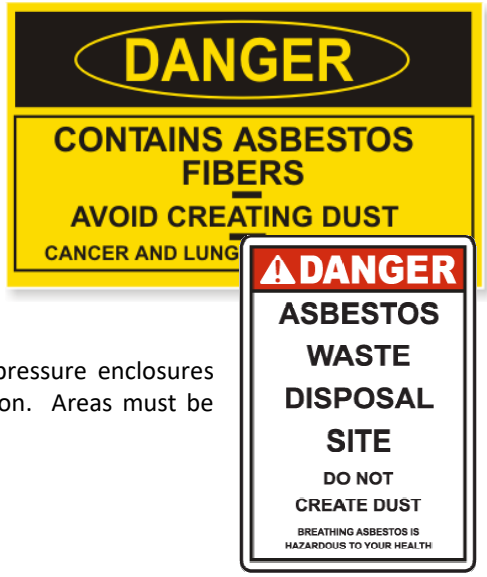
If employees can demonstrate through test results that employee exposures are below the Action Level, then monitoring is not required.

Within all regulated areas, the employer must conduct daily monitoring unless all workers are equipped with supplied air respirators (positive pressure).

If daily monitoring within the regulated area indicates, by reliable measurements, that employee exposures are below the Action Level, then no further monitoring is required for those employees whose exposures, as determined by such monitoring, are below this Action Level.

REGULATED AREA – OSHA STANDARD 1926.58

The employer must establish a Regulated Area wherever the concentrations of asbestos exceed the PEL. Only authorized personnel may enter regulated areas. All persons entering a regulating area must be supplied with a respirator. No smoking, eating, drinking or applying cosmetics is permitted in a regulated area.



Warning signs must be posted at all approaches to regulated areas. These signs must include the following information:

- Warning labels must be affixed to all asbestos products and containers, including waste containers.
- Whenever feasible, the employer should establish negative-pressure enclosures before beginning asbestos removal, demolition, and renovation. Areas must be barricaded to restrict non-authorized personnel entry.

CONTROL METHODS – OSHA STANDARD 1926.58(G)

To the extent possible, engineering and work practice controls must be used to reduce employee exposure to within the PEL. The employer and employee must implement one or any combination of the following control methods to be in compliance with this OSHA Standard:

- Local exhaust ventilation equipped with high efficiency particulate (HEPA) filter dust collection system.
- Enclosures or isolation of asbestos dust-producing processes.
- Ventilation of regulated area to move contaminated air away from employee's breathing zone and toward a filtration or collection device system with HEPA filter.
- Use of wet methods, wetting agents, or removal encapsulants during asbestos handling, mixing, removal, cutting, application, and clean-up except when infeasible (i.e. due to the creation of electrical hazards, equipment malfunction, and slipping hazards).
- Asbestos vacuum cleaners equipped with HEPA filters.
- Prompt cleanup and disposal of asbestos-containing wastes in lock-tight containers.

MULTI-EMPLOYER WORKSITES

- On multi-employer worksites, an employer performing work requiring the establishment of a regulated area shall inform other employers on the site of the nature of the employer's work with asbestos and/or PACM, of the existence of and requirements pertaining to regulated areas, and the measures taken to ensure that employees of such other employers are not exposed to asbestos.
- Asbestos hazards at a multi-employer work site shall be abated by the contractor who created or controls the source of asbestos contamination. For example, if there is a significant breach of an enclosure containing Class I work, the employer responsible for erecting the enclosure shall repair the breach immediately.
- In addition, all employers of employees exposed to asbestos hazards shall comply with applicable protective provisions to protect their employees. For example, if employees working immediately adjacent to a Class I asbestos job are exposed to asbestos due to the inadequate containment of such job, their employer shall either remove the employees from the area until the enclosure breach is repaired; or perform an initial exposure assessment pursuant to (f) of this section.
- All employers of employees working adjacent to regulated areas established by another employer on a multi-employer work-site shall take steps on a daily basis to ascertain the integrity of the enclosure

and/or the effectiveness of the control method relied on by the primary asbestos contractor to assure that asbestos fibers do not migrate to such adjacent areas.

- All general contractors on a construction project which includes work covered by this standard shall be deemed to exercise general supervisory authority over the work covered by this standard, even though the general contractor is not qualified to serve as the asbestos "competent person" as defined by paragraph (b) of this section. As supervisor of the entire project, the general contractor shall ascertain whether the asbestos contractor is in compliance with this standard, and shall require such contractor to come into compliance with this standard when necessary.

BEFORE STARTING WORK

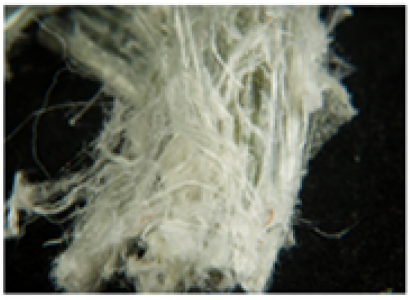
- Before planning a renovation project, know what you're working with. The presence of asbestos can pose a health hazard, especially if the asbestos material is to be cut, sanded, sawed, removed or otherwise disturbed.
- Contractors who will be working in areas containing or adjacent to Asbestos Control Materials must be informed of the presence, suspected locations and quantity during the bidding process, site orientation, and prior to the initiating of any work.
- All building and facility owners are required to have performed building surveys to identify asbestos materials before beginning any demolition or renovation work. Ask to see the survey before starting work so that you know what kinds of asbestos are present, where it is located, and what building systems are known to be constructed of, or covered with asbestos.
- If no survey is available, all potentially asbestos-containing materials MUST be presumed to be asbestos-containing until proven otherwise. This includes ceiling tile, floor tile, roofing, tars and coatings, plaster and spackle, spray-on insulation, thermal system insulation, valve packing, gasket and surfacing materials, brakes and clutches, mastic, putty, cement board, cement pipe and cement panels. These materials are called PACM (Presumed Asbestos Containing Material).
- If you believe that asbestos materials or asbestos-containing dust and debris are present in your work area, report it to your supervisor immediately and stay clear of the area until the asbestos status of the material has been determined.

WORKING AROUND ASBESTOS GENERAL GUIDELINES

- Only trained and qualified individuals are authorized to inspect, sample, repair and perform housekeeping duties around asbestos containing materials. Only certified asbestos individuals, using protective clothing and special work practices, are permitted to handle asbestos.
- Employees SHALL treat all valve packing, insulation, gasket and surfacing materials, brakes and clutches as an asbestos containing material unless proven by otherwise by laboratory analysis or company records.
- If you MUST work near asbestos-containing materials, recognize that vibration from drilling and hammering as well as air movement from air cooled tools can disturb or dislodge asbestos fibers.
- NEVER drill into, cut or damage any suspected asbestos-containing material.
- Do not use compressed air to remove asbestos or ACM unless the compressed air is used with an enclosed ventilation system.
- If asbestos, containing friable (easily broken down by hand pressure) materials such as spray-on fireproofing or pipe insulation is present, all dust and debris in the area should be presumed to be asbestos contaminated until proven otherwise. All areas above drop ceilings where friable asbestos is

present should be carefully evaluated or cleaned by certified asbestos workers before any other work is performed.

HOW DO I IDENTIFY ASBESTOS?



As asbestos materials age over time, the fibers often loosen and release into the air. Because asbestos fibers are microscopic (about 1,000 times smaller than the diameter of a human hair), the presence or absence of asbestos fibers cannot be determined by sight alone.

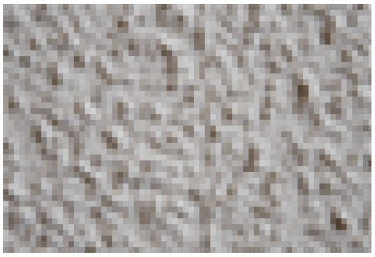
Laboratory testing using a powerful microscope is often necessary in order to identify the presence of asbestos fibers, which come in many shapes, sizes and colors. Asbestos fibers can be described as white, gray, brown, green, metallic blue, lavender or yellowish-brown, depending on the variety and how the fibers are being used. The fibers are typically long, thin, silky or pearly, and were often woven into materials to provide additional strength and resistance to heat.

If you don't know whether construction materials contain asbestos, assume they do until laboratory testing proves otherwise, especially if the materials are crumbling, peeling, cracking, water-stained or blistering.

Remember, hazardous levels of airborne asbestos fibers cannot be seen by the naked eye. If asbestos is being disturbed, airborne fibers may be present!

WHAT MATERIALS CONTAIN ASBESTOS?

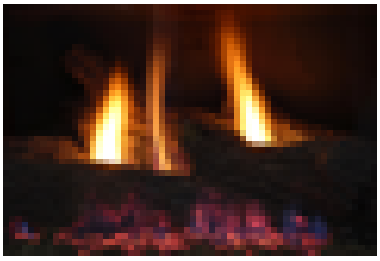
The Occupational Safety and Health Administration (OSHA) and other federal agencies have identified materials most likely to put workers and residents at risk of exposure to asbestos fibers. According to experts, the following materials may contain asbestos if they were manufactured or installed prior to the 1980s:



Sprayed-on or troweled-on surfacing materials (such as plaster, popcorn ceilings, etc.

Insulation around pipes, boilers, ducts or hot water tanks

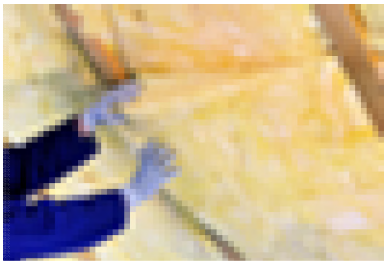
Floor tiles (asphalt, rubber, etc.) & the backing materials used to install tiles



Artificial ashes and embers in gas fireplaces

Patching compounds for wall and ceiling joints

HVAC piping



Attic and wall insulation

Loose or friable asbestos is sometimes found in old meterbox 3 phase fuses. This is white or Chrysotile asbestos packed into the fuseholder.

**This is not a complete list.*

WHAT SHOULD I DO IF I SUSPECT ASBESTOS IS PRESENT IN MY WORK SITE?

The employee must notify their foreman immediately. The foreman will notify the facility operators and they must contact a licensed inspector. This professional will perform a thorough inspection to determine the location of all asbestos-containing materials, as well as offer advice about abatement procedures and how the asbestos materials should be removed or contained.

TRAINING

To prevent accidental disturbance of asbestos, all Winger employees will be trained how to identify asbestos and what to do if they suspect asbestos is in the work area. Employees must be trained prior to or at initial assignment and at least annually thereafter. Training courses must include the following:

- Ways to recognize asbestos.
- Adverse health effects of asbestos exposure.
- Relationship between smoking and asbestos in causing lung cancer.
- Operations that could result in asbestos exposure and the importance of protective controls to minimize exposure.
- Purpose, proper use, fitting instruction, and limitations of respirators.
- Respirators shall be used in the following 4 circumstances work practice controls, work operations, to reduce exposure, & in emergencies. The respirator shall be provided at no cost to the employees and shall be chosen from those approved by NIOSH.
- Appropriate work practices for performing asbestos jobs.
- Medical surveillance program requirements.
- Contents of the standard.

- Names, addresses, and phone numbers of public health organizations that provide information and materials or conduct smoking cessation programs.
- Sign and label requirements and the meaning of their legends.
- Written materials relating to employee training and self-help smoking cessation programs at no cost to employees.
- Written materials relating to the employee training program will be readily available to affected employees, the assistant Secretary of Labor for Occupational Safety and Health and the director of the National Institute for Occupational Safety and Health.

RECORD KEEPING

Winger will establish and maintain an accurate record of safety training. Effective management of worker safety and health protection is a decisive factor in reducing the extent and severity or work related injuries and illnesses and their related costs. Winger is committed to this process.

SOURCE CREDITS:

U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), www.osha.gov
OSHA: Asbestos Standard for the Construction Industry
Cargill Corn Milling North America Asbestos Management Program
Cargill Corn Milling North America Asbestos Presentation – Eddyville
Cargill Corn Milling North America Asbestos Test Key – Eddyville
The Safe Approach: Asbestos Awareness for the Mechanical Trades – Test P
Mechanical Contractors Association of America, www.mcaa.org

DOCUMENT CONTROL:

Initial Program January 4, 2006
Revised July 16, 2007
Reviewed February 27, 2009
Revised December 16, 2011
Revised October 11, 2012
Reviewed March 11, 2013
Revised April 1, 2013
Reviewed April 8, 2015
Revised October 19, 2016
Revised September 13, 2017
Revised September 19, 2018