

## **MAJOR PROGRAM POINTS**

# **"ASBESTOS AWARENESS IN THE WORKPLACE"**

**Training For  
THE OSHA ASBESTOS STANDARD**

**Quality Safety and Health Products, for Today...and Tomorrow**

# Outline of Major Points Covered in the "Asbestos Awareness" Course

The following outline summarizes the major points of information presented in the Course on Asbestos Awareness. The outline can be used to survey the Course before taking it on a computer, as well as to review the Course when a computer is not available.

- **Custodians, Maintenance Workers and Engineering Staff face many types of hazards that are obvious:**
  - Mechanical.
  - Electrical.
  - Chemical.
  - Fire.
- **Other hazards are not obvious. Known as a "silent killer", Asbestos may not give any visible signals that it is present.**
  - No odor when it is in the air.
  - No immediate side-effects if you are exposed.
- **But after long-term exposure, Asbestos can cause:**
  - Lung disease.
  - Cancer.
  - Even death.
- **OSHA's Asbestos Standard and your facility's Asbestos Management Plan work together to combat Asbestos exposure. The Plan:**
  - Makes you aware of the hazards.
  - Sees that you are properly trained to work safely.
  - Protects you and everyone in your facility.
- **Asbestos is a mineral which has special characteristics.**
  - Most rocks can be broken down into small particles, like grains of sand.
  - Asbestos breaks down into small fibers, like the strands of a rope.
- **Asbestos fibers have special qualities.**
  - They are so small that only a microscope can see them.
  - They are also as strong as steel.

- **Asbestos also has other interesting qualities. It:**
  - Is fireproof.
  - Is resistant to heat, chemicals and bacteria.
  - Does not conduct electricity.
  - Absorbs sound.
  - Is light-weight.
  
- **For these reasons, Asbestos has been used in construction in many ways:**
  - Mixed with plaster and wallboard, for insulation and strength.
  - Sprayed onto walls, ceilings and steel girders for fire-proofing.
  - Wrapped around pipes, boilers, ducts and other utility systems for insulation.
  - Used in ceiling and floor tiles.
  
- **We now know that Asbestos is a hazardous material:**
  - The fibers can become airborne.
  - They are small and light, so that they float in the air for long periods.
  - They can easily be inhaled.
  
- **Breathing Asbestos fibers can cause Asbestosis, which results in damage to the delicate tissues inside the lungs. This disease can cause:**
  - Shortness of breath.
  - Enlargement of the heart.
  - In extreme cases, death.
  
- **The "needle-like" fibers can also push through the lung tissue and travel throughout the body.**
  - When a fiber enters a cell, it can lead to cancer.
  
- **Inhaling Asbestos fibers is especially dangerous for people who smoke.**
  - Normally, mucus captures most inhaled particles.
  - Small hairs called cilia move this mucus out of the lungs.
  - Smoking numbs cilia, letting more particles (including Asbestos fibers) into the lungs.
  - Smokers are more than 50 times more likely to develop an illness after being exposed to Asbestos.

- **The ways to limit Asbestos exposure include:**
  - Know where Asbestos is located in your workplace.
  - Keep track of the condition of all Asbestos-Containing Materials.
  - Do not disturb these materials unless you have the proper training and equipment.
  
- **"Thermal System Insulation" has been the most common use for Asbestos in structures built before 1980. It can be found around:**
  - Heating systems.
  - Boilers.
  - Utility pipes.
  - Ductwork.
  
- **Asbestos can also be found above some dropped ceilings.**
  - In sprayed-on sound and fireproofing materials.
  
- **Some types of composite materials that contain Asbestos because it adds strength and is light weight include:**
  - Plaster.
  - Wallboard.
  - Paneling.
  
- **Asbestos can also be found in some types of floor and ceiling tiles installed before 1980.**
  
- **An Asbestos Management Plan lists the locations of Asbestos-Containing Materials (ACMs).**
  - This Plan is the first place to look for information about Asbestos in your facility.
  
- **Warning signs should be posted when Asbestos is present.**
  - Talk to your supervisor if none are posted.
  
- **If an area is posted as "Restricted", do not enter it unless you are authorized.**
  - You must also have proper safety equipment.
  - If you ignore these warnings, you could be exposed to dangerous amounts of Asbestos.

- **Keep track of the condition of ACMs by looking for potential problems. ACMs can often be found in:**
  - Utility rooms.
  - Basements.
  - Crawl-spaces.
  - Above the ceiling, or underfoot.
  
- **Some of the materials that contain Asbestos, such as sprayed-on fireproofing, are "friable". This means that they:**
  - Are rough and brittle.
  - May crumble easily.
  - Can be damaged and release fibers into the air.
  
- **Other ACMs, such as floor tiles, are "non-friable".**
  - They can take much more abuse before Asbestos fibers are released.
  
- **Sometimes the potential for release of Asbestos fibers will be obvious:**
  - Asbestos insulation, a friable material, may be torn or frayed around the edges.
  - Wallboard or plaster may be broken or have a hole in it. (A pile of debris is a sure warning sign).
  - Sprayed on Asbestos may "delaminate" (peel away from the surface it's glued to).
  
- **Even "non-friable" ACMs can be damaged enough to release fibers.**
  - Floor tiles can be broken by a sudden impact, or ground down over time.
  
- **Other times the trouble signs are not as obvious.**
  - Remember that Asbestos fibers are so small as to be virtually invisible.
  - Even the slight deterioration of an ACM can result in the release of fibers.
  
- **A water stain on a ceiling tile, insulation or sprayed-on Asbestos could be a warning sign.**
  - The material may be weakened.
  - It could be more vulnerable to further damage.

- **Inspect all ACMs in your workplace periodically.**
  - Note their condition in a log book for future reference.
  - This can help spot potential problems before they grow.
  
- **If a problem is found that could release Asbestos fibers, act immediately, so that the exposure is minimized.**
  - Seal the area.
  - Post a sign warning people not to enter.
  
- **Notify the appropriate people of the situation.**
  - Your supervisor.
  - The Environmental Manager.
  - An outside company, if appropriate.
  
- **If you are qualified, put on the required Personal Protective Equipment (PPE) and temporarily patch the damaged area.**
  - Use sturdy plastic and duct tape, or other approved materials.
  
- **Professionals will construct a more permanent solution.**
  - They may enclose the Asbestos by building an air-tight box around the damaged area.
  - The Asbestos may be encapsulated by sealing it with a leak-proof material.
  
- **Some damaged materials can be repaired and restored to their original condition.**
  - Other situations may require abatement, where the ACMs are removed completely.
  
- **The key to preventing exposure is to not disturb any materials that may contain Asbestos.**
  - OSHA defines a disturbance as any activity that "... crumbles, pulverizes, generates visible debris, or otherwise disrupts an Asbestos-Containing Material."
  
- **Any activity, no matter how small, could cause dangerous contamination.**
  - Simply bumping into a friable ACM can release fibers.

- **There are a number of common custodial and maintenance activities that can become hazardous if Asbestos is involved.**
  - Pipe insulation is one of the most common ACMs encountered.
  - Do not handle or remove it yourself unless you are trained, authorized and properly equipped.
  - If it has to be removed, first discover who in your facility is qualified to handle it.
  
- **Flooring installed before 1980 often contains Asbestos.**
  - Never cut, grind or sand these surfaces.
  - This could release fibers in the air.
  
- **If a floor needs to be stripped, use only "Wet Methods".**
  - This means dampening the material so that fibers are less likely to become airborne.
  - Once the floor is wet, use a low abrasion pad at speeds of less than 300 rpm.
  
- **Dust and debris that may contain Asbestos fibers must be handled with extreme caution.**
  - Do not sweep or shovel dry materials.
  - Make sure debris is adequately wet before, during and after sweeping and bagging for disposal.
  
- **Do no use an ordinary vacuum to clean up Asbestos debris.**
  - Even a shop-grade vacuum will disperse fibers into the air.
  - Only use a HEPA vacuum.
  - They use High Efficiency Particulate Filters that prevent the release of Asbestos.
  
- **After any cleanup activity, remember to wipe the area with a damp cloth or towel to remove any fibers which remain.**
  - Properly dispose of the cloth or towel.
  
- **Above all, remember that Asbestos is dangerous.**
  - Know where it is.
  - Keep track of its condition.
  - Don't disturb it.
  - If repair or maintenance is needed, only trained and authorized personnel are permitted to handle it.

- **If you are working with Asbestos, wear the proper PPE and protective clothing.**
  - Wearing disposable overalls will make decontamination easier.
  
- **A respirator must be worn to prevent inhalation of airborne Asbestos fibers.**
  - Basic models contain HEPA filters (these block the fibers, like the HEPA vacuums).
  - Fit-test your respirator to ensure it is the right size and shape for your face.
  - If it does not fit properly, Asbestos fibers could leak through gaps between your face and the facepiece.
  - Your facility will teach you how to clean and maintain the respirator, and when and how to change the filters.
  
- **Work involving Asbestos must be contained to prevent contamination of other areas.**
  - One approach is a "negative-pressure" containment area.
  - This is time-consuming, and people working inside the containment area are still at risk.
  
- **Many projects are small enough that they can be easily contained with a "Glove Bag."**
  - This is a seamless plastic bag with sleeves and gloves.
  - It allows tools and materials to be handled inside it.
  
- **This type of work can only be performed by people who are trained and authorized.**
  - However, you may be asked to help with cleanup activities.
  
- **Asbestos is a regulated waste, so exercise caution when handling disposal bags.**
  - Be careful not to puncture the bag.
  - If a bag is punctured, immediately seal the hole with duct tape or encapsulating tape.
  - Then deposit the ripped bag into another disposal bag.



- **Labeling removed Asbestos, and disposing of it properly, is extremely important.**
  - Use a "Generator Label" which lists the name of your facility, the address and a contact phone number.
  - Do not put Asbestos into ordinary trash.
  - It needs to be hauled to a licensed landfill.
- **When finished working with Asbestos, you will have to "decontaminate".**
  - To prevent the spread of dust and debris, the decontamination area is equipped with a plastic dropcloth and a HEPA vacuum.
  - Use the HEPA vacuum to remove fibers from tools, equipment, work clothing, disposal bags and PPE.
  - Never try to brush or shake off dust and debris (this could launch Asbestos fibers into the air).
  - Overalls may be contaminated and must be disposed of as regulated waste in a disposal bag.
- **Never eat, drink or smoke in decontamination or Asbestos work areas.**
  - This increases the risk of inhaling fibers.
  - Smoking also "multiplies" the effects of exposure.
- **Always wash up after handling Asbestos.**
  - Wash hands and face thoroughly with soap and water, before eating or leaving work.
  - Shower before leaving your workplace, if possible.
  - If not, shower immediately when you get home to prevent exposing your family.
- **"Air Monitoring" may be required to measure the airborne Asbestos concentration in your workplace.**
  - You may be asked to wear an Air Sampling Device.
  - An air pump will be strapped to your waist, and a sampling cassette will be taped to the front of your shoulder.
  - A filter collects fibers from the air while you work.
  - This filter will be tested to determine how much Asbestos is present.

- **You may also need to participate in a "Medical Surveillance Program."**
  - This is to see whether you are being exposed to Asbestos.
  - It checks your ability to wear a respirator.
  - The program also requires regular visits to a doctor.
  - It may also include a breathing capacity test, x-rays or other medical tests.
  - This is all provided free of charge.
  
- **Always talk to your supervisor if you have any questions about Asbestos, OSHA's Asbestos Standard or your facility's Asbestos Management Plan.**
  
- **A summary of the major points of the program:**
  - Know where Asbestos is present in your workplace.
  - Inspect these areas regularly and look for potential problems.
  - Do not disturb ACMs unless absolutely necessary.
  - Take steps to prevent contamination when working with Asbestos.
  - Always decontaminate after coming into contact with ACMs.
  
- **Taking the correct precautions can help protect everyone in your facility from Asbestos exposure.**