

ASBESTOS AWARENESS TRAINING

The purpose of this document is to provide Asbestos Awareness Training to MICI employees who may come into contact with asbestos-containing materials. All employees must review this document prior to working on a MICI job site. Please contact Rick Amero, 425-988-6228, if you have questions on this document or identify any potential asbestos exposure in the workplace.

Overview

Asbestos is a naturally occurring fibrous silicate mineral known for its strength and durability and for its fireproof and insulation properties. During the twentieth century, some 30 million tons of asbestos have been used in industrial sites, homes, schools, shipyards, and commercial buildings in the United States. It was used widely in construction and other products until the late seventies, when the harmful nature of the product was determined, therefore:

- Buildings constructed before 1980 are presumed to contain asbestos materials.
- In 1982, asbestos was banned only from thermal system insulation (i.e., pipe wrap), surfacing materials (i.e., wall textures, popcorn ceilings, fireproofing applied to beams), and resilient floor coverings (i.e., vinyl tile or sheet vinyl). Therefore, these materials are presumed to have asbestos if they were installed prior to 1982.
- Also, the parameters of the ban were not always understood or followed, so it could be present in these banned materials even if installed after 1981, and, although certain applications are banned, it can still be found in approved applications including mastic, joint compounds, and glues.

Therefore, it is important to conduct a good faith inspection/survey, prior to work, regardless of the age of the building.

Where is it Found:

Some of the more common asbestos-containing products are:

| | | | |
|-------------------|--------------------------------|---------------------|--------------------------------------|
| Pipe-covering | Thermal seals | Floor Tile | Roofing products |
| Insulating cement | Refractory & boiler insulation | Ceiling tile | Duct insulation for HVAC systems |
| Insulating block | Doors | Mastic | Insulated electrical wire and panels |
| Cloth | Cement pipe | Adhesives | Brake & clutch assemblies |
| Gaskets | Fireproofing spray | Coatings | Fire-resistant Drywall |
| Packing Materials | Joint compound | Acoustical textures | |

How can it Harm You?

Asbestos is primarily hazardous when it becomes “friable” or easily crumbled by hand pressure. Friable fibers may be released into the air. Once in the air, fibers may be inhaled into the lungs causing asbestosis, mesothelioma, lung cancer, or other lung diseases. Ingestion of asbestos may cause stomach and/or colon cancer. In ***addition, handling asbestos materials may cause irritation to the skin and eyes.***

Asbestosis is caused when fibers become lodged in the lung tissue. The body responds by producing an acid, which scars the lung tissue and limits lung function. Though the acid damages the lung tissue, little damage is done to the corrosive-resistant asbestos fiber. The latency period, or the time it takes for the disease to develop, is often 25-40 years.

Mesothelioma and *lung cancer* are both malignant or cancerous illnesses. Mesothelioma is cancer of the outer lining of the lung and/or the abdominal wall. It is unique since asbestos is the only known cause of this disease. The latency (time it takes for the disease to become active) period for mesothelioma is 15-30

years. The latency period for lung cancer is also 15-30 years. Asbestos-related cancers tend to result from substantial long-term exposure. However, the likelihood of lung cancer is increased up to 50 percent by smoking.

Smoking greatly heightens the risk of lung cancer, and the combination of asbestos exposure and smoking increases the risk further. Below is a list of organizations which provide information on smoking cessation. You can contact these agencies to find out about educational materials and programs, as well resources in the Puget Sound area to assist you with kicking the habit.

- The National Cancer Institute: 1-800-4-CANCER
- American Cancer Society, (404) 320-3333.
- American Heart Association: (214) 750-5300
- American Lung Association:(212) 245-8000
- Office on Smoking and Health, United States Department of Health and Human Services, 5600 Fishers Lane, Park Building, Room 110, Rockville, Maryland 20857- [Smoking Cessation Information](#).

Asbestos Regulations

The Washington Safety and Health Act under the Washington Administrative Code (WAC) 296-62-077 regulates employee exposure to asbestos. The full contents of this code can be found at [WAC 296-62-077](#). This regulation establishes permissible exposure limits (PEL), safe work practices, communication of hazards to employees, and record-keeping requirements.

The Environmental Protection Agency (EPA) regulates asbestos hazards in schools and more recently in public and commercial buildings under Title 40 CFR 763. The EPA Model Accreditation Plan clarifies the level of training and expertise required of persons who are accredited to inspect and recommend management options for asbestos materials in school, public, and commercial buildings.

The Puget Sound Clean Air Agency (PSCAA) is the local regulatory authority for environmental asbestos issues. Regulation III, Article 4 regulates asbestos activities that impact air quality and disposal of asbestos containing materials. All commercial buildings or structures that are to be renovated or demolished must have asbestos surveys completed by an Asbestos Hazard Emergency Response Act (AHERA) accredited inspector to determine the presence of any asbestos containing material. A permit must first be obtained from PSCAA before conducting any renovation or demolition activities.

Permissible Exposure Limit (PEL)

No employee may be exposed to an airborne concentration of asbestos in excess of 0.1 fibers per cubic centimeter (f/cc) of air as an eight-hour time weighted average (TWA) or 1.0 fiber per cubic centimeter averaged over a 30 minute time period. An industrial hygienist will conduct sampling and TWA calculations according to regulatory guidance when PLU requires this information.

Identification

Asbestos is a unique product with sharp fibers much smaller than average dust particles. They can cause disabling and life shortening health problems many years after exposure to asbestos. Each individual may be affected to a different degree depending on one's unique body, and the time and concentration of exposure.

All types of asbestos containing material can be dangerous when handled improperly. However, all types can be properly managed. Exposure can be prevented by containment, regular inspections, and proper precautions when working around or with the material. The majority of asbestos products effectively immobilize the asbestos fibers by mixing them into a strong binding material such as cement or epoxy (e.g. vinyl floor tile). These so called "hard" asbestos materials do not generally create exposure problems unless machined, sawed or sanded.

Employers and building and facility owners must exercise due diligence in complying with these requirements to inform employers and employees about the presence and location of ACM (Asbestos Containing Material, more than 1% asbestos by weight) and PACM (Presumed Asbestos Containing Material, surface materials, thermal system insulation, vinyl flooring and mastic installed prior to 1/1/1981).

Before authorizing or allowing any construction, renovation, remodeling, maintenance, repair, or demolition project, an owner or owner's agent must perform, or cause to be performed, a good faith inspection to determine whether materials to be worked on or removed contain asbestos. The inspection must be documented by a written report maintained on file and made available upon request to the director. The good faith inspection must be conducted by an accredited inspector. Such good faith inspection is not required if the owner or owner's agent is reasonably certain that asbestos will not be disturbed by the project or the owner or owner's agent assumes that the suspect material contains asbestos and handles the material in accordance with guidelines.

Recognize Asbestos Hazards

Soft, loosely bound, "friable" asbestos containing materials are the most hazardous type. These can cause contamination of the air and exposure problems. Some asbestos products are applied in this manner, but most hazards are a result of old asbestos containing material becoming worn, damaged, vandalized, or loose, thereby releasing asbestos fibers into the environment.

Know Where To Look For Asbestos

Asbestos has been used in over 3000 different products in industry. Hazardous asbestos should be expected whenever you see torn, damaged, or deteriorated "friable" materials on walls, ceilings, pipe and tank insulation, and fire doors.

Do Not Handle Or Disturb Friable Asbestos

Certain activities and situations can result in asbestos exposure. These include:

- Mechanical action on ACM (cutting, sawing, grinding, sanding, drilling, buffing, etc.)
- Disturbing/breaking ceiling tiles
- Removing/replacing insulation
- Disturbing sprayed-on asbestos
- Damaged or deteriorated ACM
- Asbestos abatement project
- Un-surveyed construction projects in older buildings

If asbestos damage is suspected, notify the Environmental Health & Safety Coordinator of the location and nature of the problem. Vacate the room and wait for an inspection and determination to be made.

Ask For Sampling Or Protective Equipment

If you see loose friable materials or are planning a renovation or messy cleanup job which may disturb some suspicious looking material, ask your supervisor to check it out first, and submit an asbestos sample request before commencing work in this area.

Use Proper Protection When Handling Asbestos Hazards

Minimal exposure will be encountered if you wear the proper protective equipment when handling asbestos. When taking a sample, always wear a respirator that has been properly fitted, and if the substance is touched with your hands, wash them thoroughly.

Engineering controls and work practices are designed to minimize exposure to asbestos through a combination of techniques to minimize airborne fibers. In addition, using the appropriate PPE further

limits potential contact. Finally, having a wash room that contains the fibers in the designated area will limit spread to other parts of the construction site.

Asbestos exposure must be controlled by one or more of the following engineering and work practices:

- Local exhaust ventilation with HEPA filter system
- HEPA-filtered vacuums
- Enclosure or isolation
- Wet methods
- Intact handling
- Clean-up, prompt disposal and
- General housekeeping.

Our clients are responsible for identifying asbestos in the workplace. Warning signs for regulated areas will be placed in an area that is visible before entering, and warning labels will be attached to all products and their containers. These signs will include the following, and will identify areas that you should either avoid, or be prepared with proper PPE to work in the area.

Danger
Asbestos
Cancer & Lung Disease Hazard
Authorized Personnel Only
Respirators & Protective Clothing are Required in this Area

Employees will be provided with PPE including respirator, gloves, head protection, foot protection and coveralls when they are in an environment containing asbestos. The client will also ensure there is a washing, decontamination and change room.

In addition, warning labels will be affixed to all products containing asbestos including raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, and to their containers including waste containers. These labels will contain the following:

Danger
Contains Asbestos Fibers
Avoid Creating Dust
Cancer & Lung Disease Hazard
Avoid Breathing Airborne Asbestos Fibers

Pay attention to these warning labels and handle these materials with care. Also, if you find something that looks like asbestos but has not been previously identified by the site supervisor, stop work and notify your supervisor immediately so that we can take corrective actions and avoid further exposure.

Our goal is to not expose our workers to asbestos concentrations at or above permissible exposure level, and not employ certified asbestos workers. In the event we do have employees who meet one of the above criteria, we will comply with [WAC 296-62-07725](http://wac.wa.gov/wac296-62-07725) which includes providing annual examinations at not cost to the worker, and maintaining those records for the duration of employment plus 30 years.

We expect that this Asbestos Awareness Training will provide you with the knowledge necessary to identify and respond to asbestos in the workplace. Please let us know if you have any other questions or need clarification on anything provided in this document.