2. Asbestos Awareness Program
Chapter 296-65 WAC

1.0 Introduction

Asbestos is a naturally occurring fibrous silicate mineral known for its strength and durability and for its fireproof and insulation properties. It was used widely in construction and other products until 1978. Buildings constructed before 1980 are presumed to contain asbestos materials. 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.

Some of the more common asbestos-containing products are:

Pipe-covering
Insulating cement
Insulating block
Cloth
Gaskets
Packing materials
Thermal seals
Refractory & boiler insulation
Transite board
Doors
Cement pipe
Fireproofing spray
Joint compound
Floor tile
Ceiling tile
Mastics
Adhesives
Coatings
Acoustical textures
Roofing products
Duct insulation for heating, ventilation and air conditioning (HVAC) systems
Insulated electrical wire and panels
Brake and clutch assemblies
Fire-resistant drywall

2.0 Health Effects

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 and/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.

3.0 Asbestos Regulations

The Washington Safety and Health Act under the Washington Administrative Code (WAC) 296-65 regulates employee exposure to asbestos. 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.

3.1 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.

4.0 Asbestos Awareness tips

4.1 Understand The Hazard

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, transite board). These so called "hard" asbestos materials do not generally create exposure problems unless machined, sawed or sanded.

4.2 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.

4.3 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.

4.4 Do Not Handle Or Disturb Friable Asbestos

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

4.5 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, and submit an asbestos sample request to the PLU Director Environmental Health and Safety.

4.6 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, and if the substance is touched with your hands, wash them thoroughly.