

# **Asbestos Information Webpage**

*(Please note that this webpage and the information contained within is a living document. It will be updated periodically whenever new information from on-going building studies and construction projects occur.*

## **Background**

Asbestos is the name given to a group of minerals that occur naturally in the environment. Asbestos deposits are found throughout the world and it is still mined in Australia, Canada, South Africa and the former Soviet Union. It differs from other minerals in its crystal development, which are long, thin fibers. These fibers are very strong and resistant to heat and chemicals. For these reasons asbestos was added to many older building materials including structural fireproofing, insulation on pipes and ducts, acoustical decorative ceilings, flooring tiles, floor tile and other mastics and roofing materials. These types of building materials are presumed to contain asbestos (Presumed Asbestos Containing Material – PACM) if installed before 1981, unless testing has proven otherwise by testing and lab data.

When left intact and undisturbed, these materials do not pose a health risk to building occupants. There is a potential for exposure only when the material becomes damaged to the extent that asbestos fibers become airborne and are inhaled. Asbestos is more likely to release fibers when it is friable. The term friable means the material can be easily crumbled by hand pressure (imagine crushing a Saltine or Ritz cracker). If powdered or friable forms of asbestos are disturbed and become airborne, an inhalation hazard may result. In non-friable materials like floor tile, laboratory cabinet tops, and roofing materials, the asbestos fibers are tightly bound in a matrix (imagine the crispy crunchies in a Nestle Crunch Bar, surrounded and bound by chocolate), which prevents the release of fibers to the environment unless the material is abraded, drilled, grinded, sanded or sawed.

If exposed to asbestos, several factors may influence whether harmful health effects will occur. These factors include the dose (how much), the duration (how long), and whether or not you smoke. Generally, adverse health effects from asbestos are the result of long term exposure to high concentration of airborne fibers. According to the Environmental Protection Agency (EPA), airborne asbestos levels in buildings are typically very much lower than those identified in industrial work places where asbestos health effects have been observed. People who have been exposed to asbestos and are also exposed to cigarette smoke, have a greater risk of developing lung cancer than someone who does not smoke.

## **Asbestos Health Effects**

Most of the information on the health effects of exposure to asbestos has been derived from studies of workers exposed to asbestos in the course of their occupations. From these studies, it is known that asbestos fiber concentrations for such workers were many times higher than those encountered by the general public or people who live or work in buildings with asbestos containing materials. To be a significant health concern, asbestos fibers must be inhaled. As such, asbestos exposure is principally associated with following respiratory diseases.

- Asbestosis – a scarring (fibrosis) of the lung. The scarring impairs the elasticity of the lung tissue and hampers its ability to exchange gases.
- Pleural plaque – a fibrous thickening of the lining of the chest cavity.
- Mesothelioma – a cancer of the mesothelium (the lining of the chest and abdominal wall)

Increased incidence of non-respiratory diseases have been found in some epidemiological studies. Cancers of the larynx, esophagus, stomach, colon-rectum, kidney and pancreas have been found present in slightly higher than predicted levels.

Asbestos related diseases have a synergistic relationship with cigarette smoking. There is an increased risk of developing cancer from either smoking or an asbestos exposure. These two factors working together have a synergistic effect: a smoker exposed to asbestos is subject to an increased chance of developing cancer equal to the individual risk factors multiplied together.

Asbestos related diseases have very long latency periods. This is the length of time between an exposure that will result in a health effect, and the onset of symptoms related to the resulting health effect. The latency periods for asbestos related diseases range from 15-30 years for asbestosis up to 30-40 years for mesothelioma.

Asbestos related diseases conform to a dose-response relationship. That is, the greater the exposure to asbestos (in terms of airborne concentration of asbestos and length of time of exposure), the greater the incidence of asbestos related disease. Asbestos workers have the highest incidence of asbestos related diseases, significantly higher than people who live or work in buildings with asbestos containing materials.

## **Asbestos Facts**

It is not necessary to remove all asbestos containing materials from a building to assure a safe workplace. EPA recommends a practical approach that protects the health of building occupants. This approach includes locating and identifying asbestos materials in buildings, and proper management of the material.

The following summarizes the five major facts that EPA has presented in congressional testimony.

- FACT ONE: Although asbestos is hazardous, human risk of asbestos disease depends on both the amount and duration of exposure.
- FACT TWO: Based on available data from across the nation, prevailing asbestos levels in buildings appear to be very low. Accordingly, the health risk faced by building occupants also appears to be very low.
- FACT THREE: Removal is often not a building owner's best course of action to reduce asbestos exposure. In fact, an improper removal can create a dangerous situation where one did not previously exist.
- FACT FOUR: EPA only requires asbestos removal in order to prevent significant public exposure to asbestos, such as during building renovation or demolition.

- **FACT FIVE:** EPA does recommend in-place management whenever asbestos is discovered. Instead of removal, a conscientious in-place management program will usually control fiber releases, particularly when the materials are not significantly damaged and are not likely to be disturbed.

## **Asbestos at the Stockton University**

When intact and undisturbed, asbestos building materials do not pose a health risk for building occupants. Damaged materials suspected to be asbestos containing materials (ACM) should be reported by telephone to Plant Management's main number, 609-652-4221 or by email to [EHS@stockton.edu](mailto:EHS@stockton.edu). Specially trained consultants are available to visit the area, determine if a suspect material contains asbestos, and to perform a hazard assessment. To avoid potential asbestos exposure, never attempt to handle damaged materials that you believe may contain asbestos.

Plant Management and Environmental Health and Safety "EHS" provide asbestos management and abatement oversight services. All work involving removal, repair, maintenance or cleanup of Asbestos Containing Material (ACM) is conducted by outside certified workers in accordance with OSHA, EPA, state and local regulations. Adherence to these regulations is important to assure protection of workers, building occupants and the environment.

Annual Asbestos Awareness Training is provided for Plant Management personnel by EHS. General awareness for building occupants is provided by this webpage. For additional information about asbestos please contact Chris Corea by telephone at 609-652-4496, or by email at [EHS@stockton.edu](mailto:EHS@stockton.edu).

## **Types and Locations of Asbestos at the Stockton University**

(This information is based on comprehensive surveys completed in 2013 and 2014). The surveys were conducted on buildings constructed in 1980 and earlier, and does not include buildings off-campus. A new survey for these areas was completed in 2018.

**Asbestos Containing Roofing** is presumed to exist in the A-Wing thru M-Wing exterior roofing materials (except for B and F Wing roofing which was replaced in August 2013).

All varieties of roofing systems and roofing materials can contain asbestos. These include but are not limited to: shingles, rolled roofing, felts, tar, pitch, caulk, patch materials and silver flashing paint. There is no hazard performing work on or around asbestos containing roofing provided the roofing is not disturbed by the work being performed. To date, there has not been a comprehensive survey of buildings that contain asbestos roofing. There are times when roofing must be repaired or removed because of leaks or because a building is being demolished. Prior to all roof repair or replacement activities the University hires licensed asbestos sampling and abatement professionals that can take samples from the materials in order to determine whether or not they contain asbestos, and then follow all EPA regulations.

### **Asbestos Containing Flooring Tile and Mastic**

These types of building materials are found in many of the buildings on the University campus. There is no hazard performing work on or around asbestos containing flooring provided the flooring is not drilled, sanded or scraped. All nine inch by nine inch tiles are assumed to contain asbestos and many twelve inch by twelve inch tiles also contain asbestos as well as the mastic (glue) used to secure the tiles to the floor. Asbestos containing tiles are oftentimes removed because of building renovation, demolition or because the tiles become damaged or worn. Prior to all floor repair or replacement activities, the University hires licensed asbestos sampling and abatement professionals that can take samples from the materials in order to determine whether or not they contain asbestos, and then follow all EPA regulations.

### **Laboratory Slate Table Tops and Slate Beaker Drying Racks**

These “rock hard” materials are presumed and suspected of containing asbestos. However, as with many of building materials on campus the asbestos fibers are tightly bound in this material. To be a significant health concern, asbestos fibers must be inhaled. The only method to release fibers to the environment from this material is to abrade, drill, grind, sand or saw it.

### **Fire Doors**

The doors leading to and from the stairwells as suspected, or presumed, of containing asbestos due to the fact that asbestos was widely used to “fire proof” many building materials. As a matter of compliance with the regulations, University personnel such as locksmiths, carpenters, custodians or vendors will not conduct any work on fire doors that involves drilling, sanding, cutting, abrading, or otherwise generates dust until the presence or absence of asbestos has been verified.

If a door is presumed, or found to contain asbestos, all service must be conducted by a qualified asbestos abatement contractor or the door must be replaced with a non-asbestos door.

### **Transite Type Board/Panel**

This type of building material is only found in certain areas around the University (greenhouse). It was used pre-1980 because it is “rot proof” in the wet and high humidity conditions typical of a greenhouse. As with similar asbestos containing building materials the asbestos fibers are tightly bound in this material. To be a significant health concern, asbestos fibers must be inhaled. The only method to release fibers to the environment from this material is to abrade, drill, grind, sand or saw it.

### **Sample Building (Does not Represent Current Inventories)**

#### F Wing Asbestos Sampling and Analysis Information

Materials assumed to contain asbestos;

Location	Material Description	Quantity
F001 A	Ceiling Foam Tack Glue	20 LF
F001 F	Mastic associated with 12” speckled Beige Floor Tile	200 SF
F001 E	Transite Type Fume Hoods	32 SF

F001 E	Slate Lab Table Tops	80 SF
F002	Slate Lab Table Tops	1,200 SF
F003	Slate Lab Table Tops	2,000 SF
F004	Slate Lab Table Tops	150 SF
F004 C	Slate Lab Table Tops	50 SF
F004 D	Slate Lab Table Tops	40 SF
F004 D	Slate Lab Table Tops	40 SF
F005	Slate Lab Table Tops	1,300 SF
F005	Slate Beaker Drying Racks	30 SF
F006	Slate Lab Table Tops	1,300 SF
F006	Slate Beaker Drying Racks	50 SF
F007	Slate Lab Table Tops	1,800 SF
F007	Slate Beaker Drying Racks	40 SF
F009	Slate Lab Table Tops	300 SF
F010	Slate Lab Table Tops	1,600 SF
F010	Slate Beaker Drying Racks	30 SF
F012	Slate Lab Table Tops	1,100 SF
F012	Slate Beaker Drying Racks	30 SF
F0121	Slate Lab Table Tops	30 SF
F013	Slate Lab Table Tops	500 SF
F013B	Transite Type Board/Panel	800 SF
F017	Slate Lab Table Tops	120 SF
F017	Slate Beaker Drying Racks	10 SF
F022	Mastic associated with 12" speckled Beige Floor Tile	770 SF
Hallways Lower F Wings	Mastic associated with 12" speckled Beige Floor Tile	5 SF
Stairwells	Fire Doors	280 SF

Please also refer to our Asbestos Awareness PowerPoint presentation and the 2014 and 2018 Asbestos Survey Reports for similar information on asbestos.