The amount of asbestos in these products varies widely from less than 1 percent to nearly 100 percent, but any material with at least 1 percent is considered to be an asbestos-containing material (ACM). While it is often possible to suspect that a product or material contains asbestos by experience and visual inspection, actual determinations can only be made by laboratory analysis. Until a material is tested, assume that it contains asbestos.

The Environmental Health and Safety Department (EH&S) maintains a database of all samples collected on campus and has developed an inventory summary to assist in identifying areas where asbestos-containing material is located. Samples can only be taken by personnel accredited by the state of Washington. Locations not appearing on this inventory are presumed to contain asbestos and are managed as such. The inventory should be consulted prior to conducting any activities that may disturb suspect material. This inventory summary is available from EH&S.

HEALTH HAZARDS

Although asbestos is an excellent building material, it has the potential to cause serious health problems if it is inhaled. In order for asbestos fibers to be inhaled, they must first become airborne through some type of disturbance. Intact, undisturbed material does not pose a significant health risk and can be safely managed in place.

The three illnesses most commonly associated with asbestos exposure are asbestosis (non-cancerous scarring of lung tissue), lung cancer and mesothelioma (rare form of cancer which affects the lining of the lungs). These diseases do not develop immediately after inhalation but may take 15 to 40 years before symptoms appear. Most of these diseases have been diagnosed in workers who held jobs in industries such as shipbuilding, mining, milling and fabricating, where employees were exposed to very high levels of asbestos on a routine basis. Regardless, appropriate measures should be taken to minimize exposure.

ASBESTOS IN NEW MATERIALS

Asbestos is still legal in the United States. About half of the asbestos imported into the United States is used in roofing products. About one-quarter is found in coatings and 20 percent in other products. Most of these products are imported from countries where asbestos is poorly or not regulated. EWU requires an asbestos-free declaration for all new building materials found on EWU’s campus.

Surveys conducted by the Environmental Protection Agency (EPA) estimate that asbestos-containing materials can be found in approximately 31,000 schools and 733,000 other public and commercial buildings in this country.

Like managing any potential harmful material, managing asbestos requires everyone’s involvement. Everyone should take the time to become aware of the hazards associated with asbestos and then take the measures to protect themselves and others from harm. The intent of this brochure is to provide staff, faculty and students with basic information regarding asbestos safety.

WHAT IS ASBESTOS?

The term asbestos refers to a specific group of naturally occurring fibrous minerals found in certain types of rock formations. Asbestos is mined in much the same way as other minerals, such as iron, lead and copper. There are many varieties of asbestos but the three most common are chrysotile, amosite and crocidolite.

Asbestos is contained in more than 3,000 different building products. These include thermal system insulation (pipe and boiler insulation), fireproofing, floor coverings, ceiling tile, cement pipe and acoustical and decorative treatments for ceilings and walls. Asbestos fibers are mixed during processing with material which binds them together so they can be used in various applications.

Asbestos became a very popular commercial product because it was a relatively inexpensive, virtually indestructible material with desirable physical properties including chemical resistance, fire resistance, thermal insulating ability, electrical insulating ability, mechanical strength, flexibility and good friction and wear characteristics.

ENVIRONMENTAL HEALTH AND SAFETY
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http://access.ewu.edu/hrrr/environmental-health-and-safety.xml

ASBESTOS AWARENESS
Environmental Health and Safety

asbestos rock
DEFENSE MECHANISMS

The body has natural defense mechanisms which help eliminate asbestos fibers and other foreign materials before they become lodged in the lung tissue. Many particles are stopped by the nose and mouth. The breathing passages are also lined with a sticky mucous layer that traps small particles. Lining the bronchial tubes are hair-like projections called cilia that continuously move the mucous layer towards the mouth for expectoration.

SMOKING

Although smoking alone is hazardous to your health, studies show that smokers who are also exposed to asbestos have an increased risk of lung cancer which is up to 90 times that of a non-exposed, non-smoker. Nonsmokers who are exposed to asbestos have a risk of five times that of non-exposed, nonsmokers.

One explanation for this synergistic effect is that cigarette smoke greatly impairs the body’s defense mechanism by paralyzing the cilia. This allows asbestos fibers and other contaminants to reach the lungs and this is where they cause damage.

RECOGNITION OF DAMAGE

Asbestos-containing material on the Eastern Washington University campus is periodically inspected by accredited personnel. However, it is very important that you know how to recognize damaged material and then properly report it so it can be addressed in a timely manner and thus minimize risk of exposure to you and other building occupants.

The degree of friability will determine how easily a material can be damaged. Friability is the ease in which asbestos-containing material can be crumbled, pulverized or reduced to powder by hand pressure.

So, the more friable a material is, the more likely it is to become airborne. Ceiling material or fireproofing is friable as it can be easily damaged. Floor tiles, on the other hand, are non-friable as it would take quite a bit of effort to damage them. Damage can be in several forms including water damage (characteristic water ring), delamination (material has pulled away from the surface), general deterioration (aging) and physical damage (contact including gouge marks, etc.). You should immediately report any damaged material to your supervisor or the EH&S Department.

EMERGENCY PROCEDURES

If you encounter a major fiber release, you should take additional measures to protect yourself and other building occupants. A major fiber release of asbestos fibers is defined as a release of greater than 3 square feet of material and could result from water damaged ceilings, pipe rupture, or inadvertent disruption of material by contractors, staff or building occupants. If you encounter such a release:

» Notify your supervisor and/or contact the EH&S Department immediately. If the emergency occurs outside normal working hours, contact the EWU EH&S Manager at 509.290.3510.

» Do not attempt to clean up debris.

» Do not reenter the area until instructed to do so by the EH&S Department.

» Post a sign on all entry doors to inform other personnel of the hazard.

» Secure the area by closing and locking the doors.

REGULATIONS

The university’s Asbestos Management Program is operated in accordance with applicable rules and regulations including the OSHA Construction Industry Standard, the OSHA General Industry Standard, the Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants and state requirements administered by the Washington Department of Labor and Industries. Also used in the development of the university’s program were the EPA guidance documents, Guidance for Controlling Asbestos-containing Materials in Buildings and Managing Asbestos in Place: A Building Owner’s Guide to Operations and Maintenance Programs for Asbestos-Containing Materials. These documents are available for review from the EH&S Department.

ASBESTOS MANAGEMENT

The university’s Program emphasizes in-place management of asbestos-containing material because intact and undisturbed asbestos materials do not pose a significant health risk. However, occasionally, the university’s Insulation Maintenance/Asbestos Abatement Department must conduct small scale, short duration maintenance, repair or minor renovation activities (Operations and Maintenance) that may result in disturbance of asbestos-containing material. These activities can only be performed by authorized staff who have received appropriate training. These activities are also limited by the amount of asbestos-containing material and the purpose of the activity.

An example of this type of activity is a leaking pipe that is covered by asbestos-containing insulation. In order to repair the leak, personnel must first remove some insulation. These activities are performed in accordance with applicable rules and regulations that protect the worker and building occupants.

Activates and are authorized and coordinated by the EH&S Department to help ensure a safe project. Sometimes asbestos material must be abated because of the condition of the material presents a significant health risk or the activity is beyond Operations and Maintenance. These activities are also conducted by the Insulation Maintenance/Asbestos Abatement Department with oversight by the EWU EH&S Department. Asbestos abatement activities include removal, enclosure (airtight, impermeable, air-tight barrier around asbestos-containing materials to prevent the release of fibers) or encapsulation (treatment of asbestos-containing materials with a material that surrounds or embeds asbestos fibers in an adhesive matrix to prevent the release of fibers, as the encapsulant creates a membrane over the surface or penetrates the surface and material and binds its components together).

All abatement activities must be performed in accordance with all applicable federal, state and university rules and regulations and can only be performed by personnel accredited by the state of Washington (receive special training and must pass accreditation exam).

Prior to any renovation or abatement project, the area must first be inspected to identify any asbestos-containing materials that may be disturbed in the course of the project. If asbestos is identified, an EPA accredited designer will be needed to design the abatement project to assure it complies with all applicable rules and regulations. Permits must be obtained from the state and building occupants will be notified of what will be done and when it will take place.

The EWU Insulation Maintenance/Asbestos Abatement Department or an authorized contractor will be utilized to complete the project and they will use engineering controls to protect workers and building occupants.

Abatement areas will be posted with warning signs and should not be entered except by authorized personnel and only if provided with appropriate personal protective equipment. Air monitoring will be conducted throughout the project inside and outside the work area to assure concentrations are maintained below permissible limits. The EH&S Department will provide project oversight.