



UNIVERSITY OF WYOMING

Safety Office Asbestos Fact Sheet

I. General Information and History

Asbestos is the common name given to a group of naturally occurring magnesium silicate mineral fibers. Historically, the Greeks were known to have woven the fibers into lamp wicks as early as the 5th century BC. and kings of the ancient Persian Empire used tablecloths woven from asbestos fibers at their state banquets. The tablecloths were casted into a roaring fire following the meal to burn off anything that had spilled on the cloth during the meal.

Modern commercial use of asbestos began with the industrial revolution in the late 19th century. Asbestos has since been incorporated into a wide variety of building products. Its abundance, low cost, strength, durability, flexibility, resistance to chemicals, and insulating qualities made it an ideal construction material. During the first half of the twentieth century asbestos was even found in a wide variety of non-construction materials such as cigarette filters, and artificial snow. In fact, the snow that fell on Dorothy in the movie The Wizard of Oz contained asbestos fibers. The addition of asbestos fibers to soft materials such as pipe insulation and acoustic plaster was banned in the U.S. by the late 1970s. Even today, asbestos can still be added to products that encapsulate or otherwise bind the fibers such as, cement pipe and asphalt roofing tars. Due to liability issues the use of asbestos is now limited but its general presence was never actually "banned" although its use in a few applications (such as spray-on acoustical) was prohibited. Most manufacturers stopped using it in their products during the late 70's through early 80's.

II. Asbestos Containing Materials (ACM) in University of Wyoming Buildings

The presence of asbestos in University of Wyoming buildings is fairly widespread, as would be the case for virtually any older building in the United States. Because of its desirable engineering properties, asbestos was used in as many as 3,000 construction materials over many decades. Materials within University of Wyoming buildings where asbestos may be found include:

- Spray-on fireproofing and ceiling decorative acoustical textures.
- Pipe, tank, and boiler insulation; air duct seam tape, vibration cloth, air and furnace duct insulation, and gaskets.
- Muffler insulation (breaching).
- Cement pipes, flues, and exhaust ducts.
- Corrugated and flat cement siding.
- Roofing tar, felt, mastic, and shingles.
- Plaster, sheetrock, joint compound ("mud")
- Ceiling or wall tile and adhesives.
- Floor tile, sheet vinyl, linoleum, adhesives, cove base and tile adhesives.
- Lab counter tops, equipment insulation, and fume hood liners
- Fire door cores.
- Wiring insulation.
- Fire blankets and theater curtains.
- Hot plates, thermal gloves, and thermal surface insulators.

Note: These materials are referred to as "presumed asbestos containing materials" or PACM.



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III. Health Risks

The primary health hazard associated with asbestos is inhaling small airborne particles that can deposit in the lungs. Significant exposure to asbestos fibers may increase the risk of lung cancer, mesothelioma (rare cancer of the membrane that forms the lining of the chest and abdominal cavity surrounding the heart), non-malignant lung and pleural disorders such as asbestosis (a debilitating condition involving an abnormal increase in the amount of fibrous connective tissue scar tissue in the lungs), pleural plaques, pleural thickening, and pleural effusions. Such exposures would result from 40 years of occupational exposure to air concentrations of 0.125 to 30 fiber/cc. The Wyoming Occupational Safety and Health Administration (Wyoming OSHA) under 1910.1001 and 1926.1101 requires that employers ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fiber/cc of air as an eight hour time-weighted average. Asbestos-containing materials in buildings pose no risk to health unless asbestos fibers become airborne and are inhaled. Intact, sealed, and undisturbed materials are not a hazard.

Materials in good condition will not release asbestos fibers into the air under normal circumstances. Hard products such as vinyl floor tile and cement shingles contain binders that encapsulate the asbestos and prevent fiber release. Asbestos in soft products such as pipe insulation may be completely sealed within a canvas or steel jacket. Walls, ceilings, and floors may also act as barriers that separate occupied building areas from asbestos products found in mechanical rooms, crawlspaces, and attics.

Please note that urban areas have a natural "background" asbestos fiber levels in the air.

Airborne asbestos fibers have been detected over the Pacific Ocean 13 miles off the coast of San Francisco. No airborne exposure to asbestos fibers is considered desirable, but some exposure is unavoidable.

IV. Management of Asbestos at the University of Wyoming

There is no legal mandate to remove existing asbestos materials unless they are disturbed. In the case of demolition, building repair or renovation work - asbestos historical surveys are reviewed or new surveys are conducted to determine the presence of asbestos-containing material. Work involving the removal or repair of asbestos-containing material is regulated by both State and Federal laws. Trained UW personnel, or a competent consultant, complete these surveys. Subsequent abatement work is completed by a trained and qualified asbestos abatement team or an asbestos abatement consultant.



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V. Individual Protective Measures

The following measures will help protect you and others from exposure to airborne asbestos:

Do not remove, cut, drill, sand, grind, or otherwise disturb any presumed asbestos containing materials.

Do not go above ceilings, behind walls or into building spaces such as attics and crawlspaces unless these areas have been inspected and cleared by the UW Safety Office.

Do not pull cable or wiring through above-ceiling spaces with known asbestos.

Be careful not to damage walls, ceilings, or floors when moving furniture or equipment.

Do not brush, sweep, or vacuum textured asbestos ceiling plaster or plaster debris.

Immediately report any observed damage or deterioration of presumed asbestos containing materials or potential asbestos release to the UW Safety Office (766-3227) or to UW Operations (766-4936)

I will attend scheduled training. I have read and understood the contents of this document.

Employee Signature: _____ W#: _____ Date: _____