April 28, 2003

WARTBURG COLLEGE
ENVIRONMENTAL AND OCCUPATIONAL SAFETY PROGRAM

Asbestos Plan

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General

Asbestos is a generic term referring to a family of naturally occurring silicate minerals with a fibrous structure. Types of asbestos minerals most commonly used in commercial products were Chrysotile (or white asbestos - used as insulation, fireproofing and soundproofing), Amosite (or brown asbestos – used in high-friction applications such as brake shoes and clutches), Crocidolite (or blue asbestos – not a common form), and Compounds of "asbestiform" minerals (bond chemically with asbestos). Specific examples of materials containing asbestos include:

- thermal system insulation (TSI) on furnaces, ducts, boilers and hot water pipes;
- sprayed-on or troweled-on surfacing materials on ceilings and walls;
- resilient asphalt and vinyl flooring;
- suspended ceiling tiles;
- fireproof drywall, fireproof drapes and curtains;
- roofing felts and shingles;
- exterior siding shingles;
- sprayed-on fireproofing on metal beams and columns;
- high-temperature gaskets and valve insulation.

The earliest use of asbestos surfacing materials involved applications to buildings and walls for decorative and acoustical purposes. Later, it was applied as insulation coating to protect structural steel during fires.

Adults breathe an average of 13,000 liters of air every day and more when exercising or when working vigorously. Asbestos fibers are just one of several hundred substances in our air with the potential to cause health damage. Because clean air is vital to good health and disease prevention and because there is no known safe level of asbestos exposure, preventing it from entering the air is the asbestos NESHAP goal.

Asbestos is known to pose human health hazards. Inhalation into the lungs is the main route of entry into the body for asbestos fibers. Prolonged exposure to elevated amounts of airborne asbestos fibers can result in Asbestosis, a fibrotic lung disease. Epidemiologic studies have found that asbestos exposure can cause more serious health effects. These

health effects include: lung cancer and mesothelioma (a cancer of the lining of the chest and abdominal cavity) Additionally, asbestos exposure is implicated in some cancers of the digestive tract.

In recognition of these health hazards, agencies of the Federal and State Governments have established Permissible Exposure Limits (PEL) for asbestos fibers; the Occupational Safety and Health Administration (OSHA) for industrial and construction exposures and the Environmental Protection Agency (EPA) for community air quality.

The current PEL for asbestos fibers is 0.1 f/cc for employees working around asbestos or with asbestos containing building materials (ACBM).

Asbestos is expressed as "friable" and "non-friable." Friable means the material, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable means it can not. The are two categories of non-friable asbestos material. Category One includes packings, gaskets, resilient floor covering and asphalt roofing products that are more than one per cent asbestos. Category Two is a catchall for all other nonfriable asbestos materials. Examples of Category Two materials include stucco, transite, or slate siding that contains greater than one per cent asbestos.

Scope

This plan covers all employees, students, volunteers and contractors who may become directly or indirectly involved in any asbestos situation associated with Wartburg College.

Policy

Before any demolition or renovation occurs, a competent and certified inspector must be hired to inspect and sample all materials suspected to contain asbestos. A lab should test these samples. The site must be thoroughly inspected for asbestos, proper notifications must be filed with the Iowa Department of Natural Resources (DNR), and asbestos materials, if present in sufficient quantity, must be safely removed and properly disposed.

All work involving removal, repair, maintenance or cleanup of ACBM is to be done by workers with asbestos worker training and licensing, and supervised by a licensed asbestos supervisor. Whenever college employees become aware of a situation in their workplace where ACBM will be disturbed by their routine work or there is a repair situation involving or impacting ACBM, the plant superintendent must be informed. ACBM will be abated where normal employee activities will cause a situation where fibers of asbestos will become airborne.

Buildings will be inspected for the presence of ACBM before demolition or renovation work may commence. All demolitions require submitting a notification to DNR regardless of whether asbestos is present and larger projects require asbestos removal with specific procedures. After submitting the form, ten working days must pass before a demolition may

begin. The ten day period allows the DNR time to confirm that the original contractor testing was adequate and confirm the presence or absence of asbestos.

Sanding, grinding, abrading, drilling, cutting, or chipping Category One nonfriable asbestos makes the material RACM and needs proper removal by certified asbestos abatement contractors.

Personnel performing routine custodial and housekeeping functions must follow the general OSHA housekeeping requirements. These are:

1. Keep all surfaces as free as possible of dust and waste that contain asbestos.
2. Clean up all spills and sudden releases of ACM as soon as possible.
3. Never use compressed air to clean surfaces contaminated with asbestos.
4. Always use special asbestos vacuums equipped with high-efficiency particulate-air (HEPA) filters and empty them in a manner that minimizes the re-entry of airborne fibers into the workplace.
5. Never shovel, dry-sweep or use other dry clean-up methods for asbestos debris unless vacuuming or wet cleaning methods are not feasible.
6. Dispose of all waste, scrap, debris, empty containers, equipment and clothing contaminated with asbestos only in sealed, impermeable bags or containers. Warning labels must be placed on airtight containers of asbestos waste before they are transported.
7. To reduce exposure caused by stirring up asbestos fibers, OSHA standards require the following specific housekeeping methods for care of all resilient flooring materials:
   - Never sand or scrape asphalt or vinyl flooring.
   - Strip floor finishes only by wet methods, using low-abrasion pads at speeds lower than300 revolutions per minute (rpm).
   - Never burnish or dry-buff asbestos-containing flooring unless it has sufficient finish so that the pad can't contact the bare floor.
   - Never dust, dry-sweep or use a regular vacuum on any type of floor in an area that contains TSI, surfacing ACM or visibly deteriorated ACM.

It is the goal of Wartburg College to not only meet the mandated exposure levels, but to achieve the lowest practical levels of asbestos fibers in the air.

Definitions

Demolition – The act of removing a load bearing support or intentionally burning a building.

NESHAP - National Emission Standards for Hazardous Air Pollutants. The asbestos NESHAP regulations are federal regulations found in 40 CFR Part 61, Subpart M.

Nonfriable asbestos-containing material - Any material containing more than one per cent asbestos as determined using the method specified in appendix E, subpart E, 40 CFR 763, section 1, Polarized Light Microscopy, that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Particulate asbestos material – Finely divided particles of asbestos or material containing asbestos.

Regulated Asbestos-Containing Material (RCAM) – (a.) Friable asbestos material, (b.) Category I nonfriable ACM that has become friable, (c.) Category I nonfriable ACM that will be or has been subjected to grinding, sanding, cutting, or abrading, or (d.) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

Renovation – Any repair or work to a building that is not defined as demolition.

Resilient floor covering – Asbestos-containing floor tile, including asphalt and vinyl floor tile, and sheet vinyl floor covering containing more than one per cent asbestos as determined by using polarized light microscopy according to the method specified in appendix E, subpart E, 40 CFR part 763, Section 1, Polarized Light Microscopy.

Reference

OSHA, 29 CFR 1910, section 1001
OSHA, 29 CFR 1926, section 1101