Asbestos Awareness Training Handout

For Custodial/Housekeeping Workers and Class IV Asbestos Workers

This handout is provided to meet the requirements of the OSHA asbestos awareness refresher training for custodial and housekeeping workers and Class IV asbestos workers. This training allows you to:

- HEPA vac and wet clean asbestos debris
- Carry waste containers to transport equipment
- Paint non-damaged, non-friable materials
- Refinish resilient floor coverings
    - Low abrasion pads;
    - Slow speeds (<300 rpms);
    - Wet methods; and
    - Never sand finishes, burnish and dry buff only if sufficient finish is present.

Some of you may have been trained in other work classes. Refresher training for those classes will be done separately.

What is Asbestos?

Asbestos is the name given to a number of naturally occurring fibrous minerals with high tensile strength, the ability to be woven, and resistance to heat and most chemicals. Because of these properties, asbestos fibers have been used in a wide range of manufactured goods, including roofing shingles, ceiling and floor tiles, paper and cement products, textiles, coatings, and friction products such as automobile clutch, brake and transmission parts.

Health Effects

Exposure to asbestos increases your risk of developing lung disease. That risk is made worse by smoking. Disease symptoms may take up to 20 years to develop following exposure.

Three of the major health effects associated with asbestos exposure include:

- **Asbestosis** – Asbestosis is a serious, progressive, long-term non-cancer disease of the lungs. Symptoms of asbestosis include shortness of breath and a dry, crackling sound in the lungs while inhaling. Asbestosis is aggravated by smoking. There is no effective treatment for asbestosis.
- **Lung Cancer** – Lung cancer causes the largest number of deaths related to asbestos exposure. The most common symptoms of lung cancer are coughing and a change in breathing. Other symptoms include shortness of breath, persistent chest pains, hoarseness, and anemia. Lung cancer risk associated with asbestos exposure is increased by smoking. As with other lung cancers, if it is caught in the early stages it can be cured with proper medical care.
- **Mesothelioma** – Mesothelioma is a rare form of cancer that is found in the thin lining (membrane) of the lung, chest, abdomen, and heart and almost all cases are linked to exposure to asbestos. There are no outward signs in the early stages of mesothelioma; therefore, it is almost always fatal within a short period of time following diagnosis.

Other diseases related to asbestos exposure include:

- **Plural Plaque** – Plural plaque is a fibrous thickening of the lining of the chest cavity. It is typically a pre-cursor to the development of lung cancer and asbestosis.
- **Cancers of the digestive system, larynx, pancreas, and kidneys.**

Identification and Detection

Asbestos Management Plans and subsequent asbestos sampling reports are available for many of the buildings on campus. Foreman and sub-foreman have access to them through AiM. Summaries of the

Asbestos Management Plan sample results are being distributed in hard-copy form to each shop, zone office, and clock station.

Signs and/or labels are present in many mechanical rooms on campus identifying the asbestos-containing materials. These signs and/or labels are being updated and re-posted in those mechanical rooms that already have them. Signs and/or labels are being posted in the mechanical rooms where they were not or are no longer posted. Examples of the signs and labels are attached.

Typical Building Materials that May Contain Asbestos

Buildings materials that may contain asbestos include, but are not limited to: spray-on fireproofing, plaster, ceiling tiles, pipe & pipe joint insulation, duct insulation, tank insulation, resilient floor coverings, mastics, asphalt roofing materials, felts, caulking, glazings, pipe and pipe joint insulation, duct insulation, gasket materials, lightweight concrete, cement board and pipe, chemical resistant counter tops, fire door insulation, vermiculite, textured paints and coating, mortar beds and grout, drywall components, wire insulation, and elevator brake shoes. Examples of typical building materials that contain asbestos are attached.

Recognition of Damage and Deterioration

Typical causes of damage and deterioration to asbestos containing materials include:

- Water damage;
- Vibration;
- Aging; and
- Physical impact.

Examples of these are attached.

Housekeeping Requirements

- All surfaces shall be maintained as free as practicable of ACM waste and debris and accompanying dust.
- All spills and sudden releases of material containing asbestos shall be cleaned up as soon as possible. Contact the Labor Shop in the event of a release or cleanup is needed.
- Surfaces contaminated with asbestos may not be cleaned by the use of compressed air.
- Vacuuming. HEPA-filtered vacuuming equipment shall be used for vacuuming asbestos containing waste and debris. The equipment shall be used and emptied in a manner which minimizes the reentry of asbestos into the workplace.
- Shoveling, dry sweeping and dry clean-up of asbestos may be used only where vacuuming and/or wet cleaning are not feasible.
- Waste disposal. Waste, scrap, debris, bags, containers, equipment, and clothing contaminated with asbestos consigned for disposal, shall be collected, recycled and disposed of in sealed impermeable bags, or other closed, impermeable containers.
- Waste and debris and accompanying dust in an areas containing accessible ACM and/or PACM or visibly deteriorated ACM, shall not be dusted or swept dry, or vacuumed without using a HEPA filter.
- Care of asbestos-containing flooring material.
    - Sanding of asbestos-containing floor material is prohibited.
    - Stripping of finishes shall be conducted using low abrasion pads at speeds lower than 300 rpm and wet methods.
    - Burnishing or dry buffing may be performed only on asbestos-containing flooring which has sufficient finish so that the pad cannot contact the asbestos-containing material.

Fiber Release Episode
If, during the course of your work, you accidently disturb a friable (capable of being crumbled or pulverized by hand pressure) asbestos containing material or make a non-friable asbestos containing material friable:

- Stop work;
- Evacuate the area without causing alarm;
- Secure the area;
- Contact the F&S Labor shop at 333-0756;
- Contact Safety and Compliance at 265-9828;
- Do not re-enter the work area until a representative from the Labor shop or Safety and Compliance gives authorization; and
- Cleanup must be performed by licensed workers (Labor shop).

Tips to Avoid/Reduce Exposure

- Survey your surrounding before starting work to identify potential exposure hazards.
- Verify that materials are non-asbestos before disturbing them.
- Clean-up ACM/PACM debris using a HEPA vac and wet methods, or secure the location and contact the F&S Labor Shop to clean-up the debris.
- Contact Laborers Shop for disposal.
- Verify ceiling tiles are non-asbestos before moving them. Only licensed asbestos workers can remove them.
- If friable materials are located above non-asbestos ceiling tiles, ask the Laborers Shop to remove the tile and survey the work area.

Five Means to confine and minimize fiber dispersal:

- Don't Make it Friable – Don't saw, grind, sand, abrade, burn, drill, don't disturb friables;
- Keep it Wet (use amended water);
- Keep it Contained;
- Use HEPA Filters; and
- Control Air Flow.

Work practices that are ALWAYS required when working with asbestos:
For the six Asbestos Hazard Emergency Response Act (AHERA) buildings (University High School, University High School Gym, Kenney Gym, Kenney Gym Annex, 1208 Springfield, 1210 Springfield, and Children's Research Center) all asbestos work including clean-up of asbestos debris must be done by licensed asbestos workers (Labor Shop).

- Wet Methods (exempt if below freezing, water reactive chemicals being used, electrical hazards);
- HEPA Vac; and
- Prompt Cleanup and Disposal.

Prohibited work practices:

- Compressed Air;
- High Speed Saws; and
- Dry Sweeping.

Regulated Areas

- Regulated areas are established to demarcate and control access into areas where asbestos work is being conducted from areas that are accessible to the general population.
- Regulated areas are typically identified by signs posted at the entrances reading "DANGER, ASBESTOS, CANCER AND LUNG DISEASE HAZARD, AUTHORIZED PERSONNEL ONLY." Additional information regarding personal protective equipment (PPE) required for entry may also be included.
- Do not enter a regulated area if you are not qualified to enter and/or do not have the required PPE.

What to do if You Have an Exposure

- Stop work and secure the work site.
- Wash your hands and face and remove any debris still on your body.
- Contact the F&S Labor shop at 333-0756 to repair damaged material and cleanup debris.
- Fill out a First Report of Injury/Illness form.
- You may visit occupational medicine to discuss the incident with a physician. You should discuss this visit with your supervisor before seeking medical advice. Claims management may not cover the cost of the visit because there is no injury/illness (if an illness does result it will likely take 20+ years to develop), therefore, payment will be your responsibility (personal insurance plus any co-pays) or covered by your department if agreed upon by your management chain.

Additional Information

If you have any questions about this information please contact the Division of Safety and Compliance at 265-9828.

If you have work that will or will likely disturb asbestos, need suspect asbestos containing debris cleaned up in your work area, or need suspect materials sampled before your work disturbs them contact the F&S Labor Shop at 333-0756.

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Location of Friable Materials and Non-Friable Materials Likely to be Disturbed

Known Locations with ACM Spray-on/Troweled-on Fireproofing/Insulation

- #0011 Ceramics Kiln House – on roof deck
- #0037 Everitt – Walls of Mechanical Room 120
- #0064 Freer Hall – Above pool and in mechanical room above pool
- #0023 Illini Union – Roof decking of room 405B, 407B, 418A, and attic of original building (north portion). On structural members and decking through 1960s addition (south portion).
- #0109 Natural Resources Building – Attic and Basement mechanical rooms.
- #0052 Krannert Center for the Performing Arts – Rooms 143a, 144a, 144b, 156a, 162a, 501c, 509c, 700c, 702c, 708c
- #0220 Krannert Art Museum – Mechanical rooms 50 and 77.
- #0160 Education Building – On structural members and decking throughout structure.
- #0156 Law Building – Extents unknown.
- #0101 Blaisdell Hall – Room 39
- #0105 Pennsylvania Lounge Building – East portion of room 22 ceiling, and west portion of room 25 ceiling.
- #0017 Advanced Computation Building – Rooms 34, 204-218
- #0026 Altgeld Hall – Attic blown-in insulation, 1 of 3 samples came back positive, positive sample was likely damaged pipe insulation debris in the blown-in insulation.
- #0289, 1104-1112, 1126, 1139 Water Survey Buildings – Extents unknown.
- #0071 Turner Student Services – Mechanical Room 10
- #0291 Sherman Hall – Room 47

Locations with Known Damaged TSI Above Dropped Ceiling and Debris on Ceiling Tiles

- #0297 Florida Avenue Food Service – Kitchen

Known Locations with ACM Ceiling Tiles

- #0001 Davenport Hall – 2'x2' deep fissures with large pinholes in rooms 109, 116, 209, 309
- #0003 McKinley Health Center – 2'x2' multi fissured in room 32A
- #0006 Armory – 2'x2' small fissure, large pinhole, and gray backing in rooms 230, 233, 239, 205W, 206, 207, 208, 209, 210, 211, 223, 224, 225
- #0012 Noyes Lab – 2'x2' fissured in rooms B7, B38, B44, B64, B75, 13 & adjacent hallway, 54, 56-62, 72-74, 77, 78, 80, 81, 89, 219, 233, 235, 301-306, 308-321, 341, 342 346, 358, 359
- #0015 Engineering Hall – 1'x1' white dotted (may have been removed during 98 remodel)
- #0026 Altgeld – 2'x2' wide fissured in room 130 at north wall and near the south door at the west wall, and in the hallway leading to room 130; 2'x4' near the south door at the west wall of room 130
- #0029 Mechanical Engineering Lab – 2'x2' white fissured pattern in room 252 (may have been removed during remodel)

- #0034 Material Science and Engineering Building – 2'x2' deep fissures and holes in rooms 117, 223-225, 232, 233, 325; 2'x2' long deep fissures in rooms A28, A35-A38, A43, 144
- #0039 Music Building – 2'x4' white fissured just inside 1st floor tunnel
- #0224 1205 W. Nevada – 2'x2' course fissured in rooms 3-6
- #0252 Orchard Downs Housing Maintenance Warehouse – 2'x4' with long gouges and small holes in Paint Shop, Sign Shop, Office and Paint Storage

*Mastic for ALL glued-on ceiling tile should be assumed ACM.

Known Locations with ACM Plaster

- #0026 Altgeld – Consider plaster throughout to be ACM. Only the top coat was tested as part of the management plan. Bottom coat has come back positive in various locations.
- #0150 1208 W. Springfield – Throughout
- #0199 1001 W. Nevada – Throughout
- #0224 1205 W. Oregon – Throughout
- #0243 Oil Chemical Building, 508 S. 6th St. – Rooms 100, 100A, 100B
- #0249 Orchard Downs Community Center – Throughout
- #0295 912 W. Illinois – Throughout
- #0934 Dairy Milking Parlor – Rooms 12 and 13

Known Locations with ACM Drywall Systems

- #0061 University High School
- #0150 1208 W. Springfield

Identification and Detection

Identification and Detection

- Sprayed-On/Troweled-On Surfacing Materials
  - Sprayed-on fire proofing/acoustical material
  - Plaster
  - Wall/ceiling texture
  - Paint
  - May be soft or hard, friable or non-friable

Identification and Detection

- Thermal System Insulation
  - Pipe insulation
  - AHU/Duct insulation
  - Tank Wraps
  - Vermiculite
  - Can be friable or non-friable depending on condition

Identification and Detection

- Miscellaneous Materials
  - Resilient floor coverings – floor tile, linoleum, mastic
  - Ceiling tiles
  - Cementitious materials – mortar, concrete, transite
  - Packing and flexible sealants – caulk, glazing
  - Asphalt roofing products – shingles, felts, rolled-on/built-up
  - Gaskets – pipe seals, vibration baskets
  - Paper and clothe – wire insulation
  - Usually non-friable but precautions should be taken not to burn, drill, grind, abrade, saw, or sand these materials.

Identification and Detection

- Miscellaneous Materials





Identification and Detection

- Miscellaneous Materials





Recognition of Damage, Deterioration, & Delamination

Water damage



Recognition of Damage, Deterioration, & Delamination

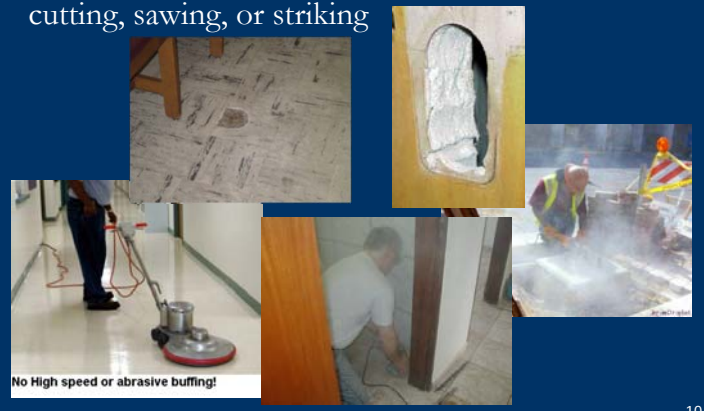
Continual vibration


Recognition of Damage, Deterioration, & Delamination

Aging

Recognition of Damage, Deterioration, & Delamination

Physical impact such as drilling, grinding, buffing, cutting, sawing, or striking



Facilities & Services
DIVISION OF SAFETY AND COMPLIANCE

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Date: _____

Shop: _____

Last Name	First Name	UIN	Signature