

# UNIVERSITY OF TOLEDO

SUBJECT: ASBESTOS MANAGEMENT PROCEDURE

Procedure No: HM-08-025

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## PROCEDURE STATEMENT

Building and construction materials known or assumed to contain asbestos will be managed in such a way as to prevent the potential exposure of University faculty, staff and students to asbestos fibers.

## PURPOSE OF PLAN

To protect the health and safety of faculty, staff and students and to ensure compliance with applicable environmental and occupational health and safety rules.

## PROCEDURE

### I. Identification of Asbestos-Containing Material (ACM)

Asbestos was a constituent of many construction-related materials until the mid-seventies. The table at the end of section I describes some of these. After it was well-established as an occupational lung hazard, numerous regulations were promulgated regarding the procedures for safe management of these materials in buildings.

Surveys have been conducted in University buildings to identify where these materials are located. The results of these surveys are available for review in the Environmental Health and Radiation Safety Department.

- A. In day to day operations, both routine maintenance and renovation activities should assume the building products listed below contain asbestos until the results of lab testing prove otherwise.

Requests for samples of materials may be submitted to the Environmental Health and Radiation Safety Department. No University employee, except those certified and licensed in asbestos sampling procedures will collect asbestos samples. Employees should wear appropriate personal protective equipment and follow standard asbestos sampling procedures including recording their name, the time, date, area of the institution, and a short description of material sampled and its location. Environmental Health and Radiation Safety will sample any suspect material at the request of employees.

- B. All contracted renovations at the University should be evaluated for their potential impact on materials described in Table 1. Affected materials should be tested if their asbestos content is not documented.

Materials likely to require testing include vinyl floor tile or sheet flooring, construction mastics, wall boards and roofing felt/shingles. Results of testing will be provided to contractors.

Asbestos containing materials that will be disturbed by renovation must be removed by a licensed asbestos abatement contractor, approved by the Environmental Health and Radiation Safety Department.

Table 1. SAMPLE LIST OF SUSPECT ASBESTOS-CONTAINING MATERIALS (ACM)

Cement Pipes	Decorative Plaster	Laboratory Hoods/Table Tops/Fixtures
Cement Wallboard	Textured Paints/Coatings	Elevator Equipment Panels
Cement Siding	Ceiling Tiles and Lay-in Panels	Elevator Brake Shoes
Asphalt Floor Tile	Spray-Applied Insulation	HVAC Duct Insulation
Vinyl Floor Tile	Blown-in Insulation	Boiler Insulation
Vinyl Sheet Flooring	Fireproofing Materials	Breeching Insulation
Flooring Backing	Taping Compounds (thermal)	Ductwork Flexible Fabric Connections
Flooring Mastic/Glue	Hard Pipe Insulation	Fire Curtains
Construction Mastics (floor tile, carpet, ceiling tile, etc.)	Packing Materials (for wall/floor penetrations)	Cooling Towers
Acoustical Plaster	High Temperature Gaskets	Pipe Insulation (corrugated air-cell, block, etc.)
Heating and Electrical Ducts	Roofing Felt	Wallboard
Electrical Panel Partitions	Base Flashing	Joint Compounds
Electrical Cloth	Fire Doors	Vinyl Wall Coverings
Electric Wiring Insulation	Caulking/Putties/Window Glazing	Spackling Compounds
Roofing Shingles	Adhesives	Fire rated doors (non-metallic)
Vermiculite Insulation (Block Walls)*		

**NOTE:** This list does not include every product/material that may contain asbestos. It is intended as a general guide to show which types of materials may contain asbestos. Weyerhouser (Health Science Campus) doors have either a blue dowel (pre-1978, asbestos) or a green dowel (post-1978, no asbestos) on the top of hinged side of door. Birch doors from RHC contain "no asbestos". Poncraft doors also contain asbestos. \*Currently the Facility Support Building and Ruppert Health Center have vermiculite insulation contaminated with 1-2% tremolite asbestos.

## II. Asbestos Coordinator

- A. The University shall appoint an Asbestos Coordinator to oversee all asbestos survey and abatement activities (currently Greg Mason at 419-530-3600).
- B. The duties of the Asbestos Coordinator shall include the following:
  1. Development and implementation of the University's Asbestos Management Plan.
  2. Development and implementation of the University's Asbestos Awareness Training Program.
  3. Review of renovation and demolition projects to ensure compliance with applicable Local, State and Federal Asbestos Laws and Regulations.
  4. Coordination of asbestos surveys and building inspections.
  5. Supervision and coordination of asbestos abatement activities at the University by outside contractors.
  6. Maintenance of training, survey and asbestos abatement records.

## III. Asbestos Building Surveys and Inspections

- A. The University shall conduct a complete asbestos survey and inspection of any and all parts of any facility to be demolished or renovated. Such inspection may be performed by a consultant.
  1. The University shall maintain surveys and inspection records and reports of all buildings on campus suspected of containing asbestos building materials. Asbestos surveys for buildings constructed after 1993 will not have been surveyed.
    - The building survey will be used to determine the impact of proposed demolition/renovation projects on identified asbestos containing material.
    - The University shall develop a proactive inspection and management plan for all asbestos containing materials identified in the building survey.
  2. Asbestos building surveys shall be accessible to University faculty and staff during normal business hours in the Environmental Health and Radiation Safety Department.

- B. All asbestos surveys and inspections shall be conducted by a person trained, certified and licensed by the Ohio Department of Health as an Asbestos Hazard Evaluation Specialist.
- C. All suspect asbestos containing materials (any thermal system insulation and surfacing material found in buildings constructed no later than 1980) shall be considered "presumed asbestos containing material" (PACM) until three bulk samples of the material have been analyzed by an accredited laboratory and shown to contain less than 1% asbestos.

#### IV. Asbestos Awareness Training

- A. All Maintenance services, Building Services, Student Union and Residence Life Maintenance and Housekeeping employees shall be required to attend an Asbestos Awareness Training session on an annual basis.
- B. The University Asbestos Coordinator shall maintain records of employee participation in Asbestos Awareness training sessions.
- C. The Asbestos Awareness Training shall cover the following topics:
  - 1. What is asbestos
  - 2. Uses of asbestos
  - 3. Important definitions
  - 4. Identification of asbestos containing materials
  - 5. Health effects from asbestos exposure
  - 6. Laws regulation asbestos
  - 7. Where asbestos can be found at the University
  - 8. When asbestos is potentially hazardous
  - 9. Asbestos removal techniques
  - 10. Abatement alternatives
  - 11. Storage, transport and disposal of asbestos containing materials
  - 12. Discussion of UT's Asbestos Management Plan

#### V. Demolition and Renovation Projects

- A. The University Asbestos Coordinator shall review all Facilities and Construction demolition and renovation projects to be completed by outside contractors for the potential to disturb suspect asbestos containing material.
- B. Facilities Maintenance supervisors shall review all work orders for the potential to disturb suspect asbestos containing material. Facilities Maintenance workers should be alert to identify any suspected asbestos containing material before disturbing it. Facilities Maintenance personnel are to notify the Asbestos Coordinator who will make take appropriate action in the case including survey records review, resampling, and coordinating removal by a licensed asbestos removal contractor. Any work order which requires cutting, drilling, sawing, grinding or other wise disturbing suspect asbestos containing material will be sent to the Asbestos Coordinator for appropriate action.
- C. The University shall sample any suspect asbestos containing material which could be affected by demolition and/or renovation activities. No work may be initiated until:
  - 1. Sample results confirm that the area of the facility to be affected does not consist of asbestos containing material; or
  - 2. All required asbestos containing material has been removed by a certified, licensed asbestos abatement contractor.
- D. Any and all demolition and renovation work must immediately cease of asbestos containing material is encountered during any project at the University. Work may not resume unless and until the suspect asbestos containing materials has been sampled, and
  - 1. Has been shown not to contain asbestos; or

2. Has been shown to contain asbestos and has been removed by a certified, licensed asbestos abatement contractor.

#### VI. Asbestos Removal Operations

- A. The University Asbestos Coordinator or other authorized representative trained in the provisions of the Asbestos NESHAP and the means of complying with this regulation (Ohio Department of Health Certified Asbestos Hazard Abatement Specialist) shall coordinate stripping, removing, waste disposal and handling of all ACM during renovation/demolition activities. All persons working on any asbestos abatement project at the University of Toledo shall be licensed and/or certified by the Ohio Department of Health.
- B. All asbestos abatement projects at the University shall comply with Section 112 of the Clean Air Act, as amended by Section 301 of the 1990 CCA Amendment, and with all of the requirements of the Asbestos NESHAP at 40 CFR 61.140 and Ohio Administrative Code Chapter 3745-20.
- C. A detailed description of the project work scope, including the amount in linear or square feet of ACM to be abated, exact location and type of material, and whether or not a contained work site will be established shall be prepared by an Asbestos Hazard Abatement Project Designer certified by ODH.
- D. Clearance Air Sampling (when necessary)
  1. All clearance air-sampling is to be analyzed by phase contract microscopy (PCM) shall be conducted in accordance with the National Institute of Occupational Safety and Health (NIOSH) method 7400 entitled "Fibers" published in the NIOSH Manual of Analytical Methods, 3<sup>rd</sup> Edition, Second Supplement, August 1987. A minimum of three samples shall be taken and show that the concentration of fibers for each sample is less than or equal to 0.01 fibers per cubic centimeter of air.
  2. All clearance air-sampling to be analyzed by Transmission Electron Microscopy (TEM) shall be conducted in accordance with the regulations established by the US EPA, 40 CFR Part 763, subpart E, Appendix A.
  3. All clearance air-sampling shall be conducted by as Asbestos Hazard Abatement Air-monitoring Technician, Asbestos Hazard Abatement Specialist certified by ODH, or CIH or IHIT as certified by the American Board of Industrial Hygiene.

#### VII. Maintenance of Asbestos-Containing Flooring Materials

- A. The following work practices relating to the maintenance of asbestos containing flooring materials are required:
  1. Sanding of asbestos-containing flooring materials is prohibited.
  2. Stripping of finishes shall be conducted using low abrasion pads at speed lower than 300 rpm and wet methods. Stripping of unwaxed or unfinished asbestos-containing flooring is prohibited.
  3. 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. In most cases, at least three layers of wax will provide that margin.
- B. Removal of Asbestos-Containing Floor Tile
  1. Unbroken, loose floor tiles may be wetted and placed in properly labeled, double bags by Plant Operations and Maintenance trained supervisors or left in place and removed by the University's abatement personnel or outside contractor.
  2. Broken, chipped, cracked or crumbling floor tiles shall be considered friable ACM unless testing results indicate otherwise and shall be removed using negative containment and wet methods. Handling or disposal of broken floor tiles by other than an ODH certified Asbestos Hazard Abatement Specialist or Worker is prohibited.

#### VIII. Recordkeeping

- A. Signed manifests returned from asbestos disposal facilities shall be maintained by the University Asbestos Coordinator.

- B. Copies of TDPC, OEPA and ODH notifications shall be maintained by the University Asbestos Coordinator.
- C. Information regarding small scale asbestos removal projects (less than 50 square feet/50 linear feet) shall be maintained by the University Asbestos Coordinator.
  - 1. Location where asbestos containing material was removed.
  - 2. Amount of friable or non-friable asbestos containing material removed.
  - 3. Name and address of abatement contractor
  - 4. Name and address of disposal facility.
- D. Information describing the procedures employed for disposal of all asbestos removed during any asbestos removal operation that is subject to OAC Chapter 3745-20 shall be maintained by the University Asbestos Coordinator.
  - 1. The date of the completion of the asbestos removal operation.
  - 2. The quantity of friable asbestos material removed.
  - 3. The asbestos packaging procedures.
  - 4. The location of the asbestos disposal and disposal procedures employed at such location
  - 5. Copy of the shipping manifest employed.

IX. Asbestos Contractors

- A. For asbestos emergency or maintenance abatement or repair, call one of the following local companies in the order presented.
  - 1. Midwest Environmental Control  
Rick Sheets or Scott Sellers  
419-382-9200 (24-hour service)  
4708 Angola Rd.  
Toledo, OH 43615
  - 2. Total Environmental Services  
Terry Bradfield  
419-244-6555  
1950 Clinton St.  
Toledo, OH 43607

IX. Asbestos Exposure Protocol

- A. When it has been determined that a potential, or actual exposure to asbestos has occurred on the campus of the University of Toledo the following steps will be taken.
  - 1. The potential for additional exposures shall be addressed immediately by EHRS. If the ACM can be removed, or encapsulated it shall be accomplished immediately. Individuals shall be protected from additional exposure, or removed from the location while this is accomplished. Clearance air samples shall be performed to confirm the effectiveness of the removal and/or encapsulation methods.
  - 2. Suspect ACM shall be bulk sampled by EHRS and sent to a third party contractor for analysis. Results shall be maintained and documented in the EHRS department. Results will be provided to individuals affected if requested.
  - 3. Based on the results of bulk sampling, or on previous positive results for asbestos the individuals potentially exposed will be informed that they can receive post exposure medical surveillance if desired.
  - 4. The following steps will be taken in regards to compensated medical surveillance at the University of Toledo and University of Toledo Medical Center:
    - a. The Department of Family Medicine shall provide a point of contact for all individuals involved in the potential exposure.

- b. A respiratory symptom (Asbestos) Questionnaire with the approximate date of initial exposure and duration.
  - c. Baseline screening assessment at "No less than 10 year after first exposure." This baseline should include imaging (chest X-ray with possible B-reader or low dose chest CT for those with symptoms and/or chest pain, or abnormalities on X-ray) dependent of physician's order.
  - d. A functional assessment (spirometry with/without bronchodilator and DLCO-diffusion capacity).
  - e. The results of these tests will be reviewed by the assigned physician and discussed during the scheduled office visit with possible consultation with Pulmonologist.
  - f. Potential evaluations may be performed every 2-3 years depending on the intensity and duration of the exposure, and the results of the first screening (more disease, shorter screening intervals).
- B. EHRS will complete a detailed report documenting all information collected and individuals involved in the incident.

Source: Safety and Health Committee

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