

Asbestos Management GuidelineDate of
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EMUDPS-EHS-P013

Revision: 1

I. PURPOSE

This Asbestos Management Guideline is designed to achieve compliance with the Michigan Licensing and Regulatory Affairs (LARA) General Industry and Construction Standards for Asbestos and the Environmental Protection Agency (EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP). As well as reduce or eliminate the risk of Eastern Michigan University (EMU) faculty, staff, students and contractors exposure to asbestos containing materials.

II. SCOPE AND APPLICATION

This guideline applies to all EMU employees. Outside contractors must also comply with these guidelines or have a more stringent program.

III. DEFINITIONS

Asbestos - includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, actinolite, and any of these minerals that have been chemically treated and/or altered.

Asbestos Containing Material (ACM) - any material containing more than 1% asbestos.

Authorized Person - any person authorized by the employer and required by work duties to be present in regulated areas.

Class I Asbestos Work - activities involving the removal of thermal system insulation (TSI) and surfacing ACM and PACM.

Class II Asbestos Work - activities involving the removal of ACM which is not TSI or surfacing material. This includes, but is not limited to, the removal of asbestos containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III Asbestos Work - repair and maintenance operations, where ACM including TSI and surfacing ACM and PACM, is likely to be disturbed.

Class IV Asbestos Work - maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities.

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Disturbance - is activity that disrupts the matrix of ACM, crumbles or pulverizes ACM, or generates visible debris from ACM. Disturbance includes cutting away small amounts of ACM or PACM no greater than the amount which can be contained in one standard sized glovebag or waste bag in order to access a building component. The amount of ACM disturbed shall not exceed that which can be contained in one glovebag or waste bag and the bag shall not exceed 60 inches in length and width.

Enclosure - an airtight, impermeable, barrier around an ACM designed to prevent the release of asbestos fibers into the air.

Fiber - a particulate form of asbestos 5 micrometers or longer, with a length to diameter ratio of at least 3 to 1.

Friable - ACM that when dry, can be easily crumbled or pulverized to powder by hand pressure and is therefore likely to emit fibers.

Glovebag - is not more than a 60 x 60 inch impervious plastic bag-like enclosure affixed around an ACM, with glove-like appendages through which material and tools may be handled.

High-Efficiency Particulate Air (HEPA) Filter - a filter capable of trapping and retaining at least 99.97% of 0.3 micrometer diameter mono-disperse particles.

Homogenous Area - an area of surfacing material or TSI that is uniform in color and texture.

Presumed Asbestos Containing Material (PACM) - TSI and surfacing material found in buildings constructed no later than 1980. Note, PACM is considered to be and is to be handled as ACM unless analytical testing reveals the material is not ACM.

Regulated Area - an area established by the employer to demarcate areas where airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed, the permissible exposure limits (PEL).

Surfacing Material - material that is sprayed, troweled-on or otherwise applied to surfaces such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes.

Thermal System Insulation (TSI) - ACM applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat loss or gain.

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IV. RESPONSIBILITIES

A. Facilities Planning and Construction

1. Request asbestos surveys and/or testing during the design phase of any project potentially involving the disturbance of ACM and PACM.
2. Include EHS in the project planning discussions involving abatement work.
3. Provide oversight of projects involving asbestos related activities and coordinate any asbestos related activities with EHS. This includes renovations, demolitions, alterations and system change outs.
4. Report all accidental asbestos disturbances to EHS.
5. Provide EHS with the documentation that a renovation or new construction does not contain ACM. Documentation includes safety data sheets (SDSs) and/or signed affidavit noting no asbestos containing materials were used.

B. Forepersons, Managers and Supervisors

1. Ensure employees who are required to be asbestos trained attend the required trainings.
2. Ensure employees follow the requirements of this guideline for abatement work and asbestos concerns.
3. Contact EHS at (7-0794) for technical assistance, testing, and/or if ACM or PACM is accidentally disturbed.
4. Submit an Occupational Injury/Illness form for any potential asbestos exposure. Forms are available at:
https://www.emich.edu/riskmanagement/docs/work_comp-injuryreport.12162015.pdf

C. Employees

1. Attend asbestos trainings as required by your assigned duties.
2. Report any suspect materials and/or disturbances to your supervisor or EHS.
3. Only handle ACM if you are trained, have the appropriate personal protective equipment and can do so following the requirements of this guideline.

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D. Environmental Health and Safety (EHS)

1. Implement the EMU Asbestos Management Guideline, providing technical assistance as necessary. Review and revise the guideline as necessary.
2. Coordinate training for asbestos awareness annually and other asbestos trainings as necessary.
3. Contact and coordinate abatement and environmental consulting services for asbestos abatement activities.
4. Maintain records of all abatements, training, air monitoring, asbestos testing, buildings surveys and employee exposures.
5. Review and revise University asbestos contract specifications in conjunction with Purchasing and Facilities Planning and Construction as necessary.
6. Serve as a liaison to local, county, and state agencies regarding asbestos issues and inspections.

V. PROCEDURES

A. General Asbestos

1. Under no circumstances are EMU personnel or untrained contractors to disturb ACM or PACM. Individuals that knowingly endanger themselves and/or others by disturbing known or suspected ACM will receive disciplinary action up to and including termination.
2. ACM will be abated by properly trained, equipped and licensed contractors that are legally able to handle the material.
3. The manager, project manager, supervisor or foreperson is responsible for notifying EHS prior to abatement activities.
4. Activities requiring the disturbance of ACM shall follow this guideline.

B. Asbestos Abatement Contractors

1. Asbestos abatement contractors must be prequalified to perform Time and Materials (T&M) work and to bid on University projects. The Purchasing Department oversees the prequalification and contracts with outside contractors. However, this does not include subcontractors. Subcontractors are not prequalified, but EMU reserves the right to reject a subcontractor.

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2. EHS in conjunction with Facilities Management coordinates the T&M abatement work and air monitoring.
3. For construction projects and or bid abatement work, Facilities Planning & Construction uses the General Contractor to oversee and coordinate the asbestos abatement contractor. EHS coordinates the environmental consultant for abatement projects.

C. Environmental Consulting Contractors

1. Environmental consulting contractors must be prequalified to perform Time and Materials (T&M) work. The Purchasing Department oversees the prequalification and contracts with outside contractors.
2. All asbestos abatement projects have a third party environmental consultant to monitor the air and provide oversight of the abatement. EHS coordinates the scheduling of the environmental consultants.

D. Unscheduled Asbestos Abatement

1. Upon encountering disturbed ACM or upon noticing that an activity has unknowingly disturbed asbestos containing material, stop all work in the immediate area.
2. The employee will immediately notify their supervisor, foreperson or project manager.
3. The supervisor/foreperson/project manager will notify the appropriate manager and will coordinate the shutdown of any necessary equipment.
4. The manager/project manager will notify EHS.
5. EHS will coordinate the abatement and air monitoring and then confirm the scheduled abatement work with the Physical Plant.
6. If the unscheduled abatement exceeds 10 linear feet or 15 square feet, the abatement contractor will need to submit an emergency notification to the state.
7. EHS will provide written notification to the affected EMU parties of the abatement work.
8. Once the area has been satisfactorily abated EHS will notify the above affected parties of the abatement completion.

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9. The Physical Plant will restore the operations of all equipment shutoff as a result of the abatement.

E. Scheduled Asbestos Abatement

1. The designated project manager, foreperson or manager will notify EHS of the need for abatement.
2. A site visit will be made by the appropriate project manager, foreperson, manager and EHS to review the scope of the work.
3. EHS will contact the abatement and air monitoring companies to schedule the abatement work.
4. For abatement projects that exceed 10 linear feet or 15 square feet the Michigan Department of Licensing and Regulatory Affairs (LARA) must be notified. This notification requires **10 calendar days**.
5. For projects exceeding 260 linear feet or 160 square feet, the Michigan Department of Environmental Quality (MDEQ) must be notified. This notification requires **10 working days**.
6. EHS will provide written notification to the affected EMU parties of the abatement work.
7. Once the area has been satisfactorily abated, EHS will notify the above affected parties of the abatement completion.
8. The Physical Plant will restore the operation of all equipment shutoff as a result of the abatement.

F. Construction Project Abatement

1. Projects managed by a General Contractor will comply with the following:
 - a. The General Contractor is responsible for all abatement work, when abatement is included in their scope of work. EHS coordinates third party environmental contractors. See Section V. Procedures, C. Environmental Consulting Contractors.
 - b. Prior to any abatement work proceeding, the General Contractor will notify the project manager.
 - c. If abatement is in an occupied space or building, the project manager will notify EHS, and EHS will notify the affected parties of the abatement work.

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- d. The General Contractor will notify the project manager when the abatement is complete. If the project was in an occupied building, the Environmental Consultant will provide EHS with the documentation of clearance. Upon receipt of the clearance, EHS will notify the affected parties of the abatement completion.
2. Projects managed by Facilities Planning and Construction or Facilities Maintenance will follow the requirements of Scheduled Asbestos Abatement, Section V. Procedures, E. Scheduled Asbestos Abatement.

G. Abatement Air Monitoring

1. Asbestos abatement work is air monitored by an environmental consultant. The consultant in conjunction with EHS and regulatory requirements determines the monitoring to be performed. For most abatement work, personal, area and clearance monitoring is performed.
2. Environmental consultants must be trained to analyze asbestos fibers following the requirements of the National Institute for Occupational Safety and Health (NIOSH) 582 course.
3. Environmental consultants must use the NIOSH method 7400 (Asbestos and Other Fibers by PCM – Phase Contrast Microscopy) sampling method for asbestos sampling. On occasion, Transmission Electron Microscopy (TEM) sampling may be required.
4. The Michigan Licensing and Regulatory Affairs (LARA) Occupational Health Standard Asbestos for General Industry permissible exposure limit (PEL) for employee exposures to airborne asbestos is 0.1 fiber per cubic centimeter of air (f/cc) as an 8 hour Time Weighted Average (TWA). The Excursion Limit (EL) shall not be exceeded and is 1.0 f/cc of air as averaged over a sampling period of thirty (30) minutes. These limits must be adhered to for all abatement work.
5. Upon completion of the abatement work, a re-occupancy clearance must be provided by the environmental consultant to EHS. For clearance, the EPA recommended level of 0.01 f/cc of air must be met. Please note, the State of Michigan re-occupancy clearance level is 0.05 f/cc following asbestos abatement activities.

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H. Floor Tile Abatement

1. Asbestos floor tile and mastic are to be removed by licensed abatement contractors.
2. Abatement contractors are to remove mastic by mechanical methods only. Chemical abatement is not allowed.
3. In the event of loose intact floor tiles, EMU personnel can pick up the tiles if they are wearing gloves and there are no more than 3 loose tiles. Place the tiles in a plastic bag and take the bag to EHS at the Physical Plant.
4. For repair of an area with loose intact floor tiles, no more than a 3 square feet area per project can be repaired by EMU personnel.
5. If floor tiles are broken into small pieces, isolate the area and contact EHS for the tiles to be removed by a licensed abatement contractor.

I. Asbestos Surveys

1. Asbestos surveys are performed by an environmental consultant following the requirements of the Michigan Licensing and Regulatory Affairs (LARA) General Industry and Construction Standards for Asbestos and the Environmental Protection Agency (EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP).
2. Asbestos surveys are conducted prior to the renovation of/in any building.
3. For renovations in a newer building, a survey must still be conducted but will require less sampling if EHS has on file a copy of the documentation that the building does not contain ACM or if the building materials are labeled that they do not contain ACM.
4. Roofing materials are not surveyed and are assumed to be positive. Roofing contractors shall be notified of the potential for the roof to contain asbestos and shall perform the work following the requirements of the settlement agreement with the state regarding roofing abatement including roofing employees being Class II trained and using equipment with HEPA filters.
5. Asbestos survey information is available from EHS.

J. Notifications

1. Notifications to the State of Michigan – Asbestos abatement contractors are required to submit notifications as follows:

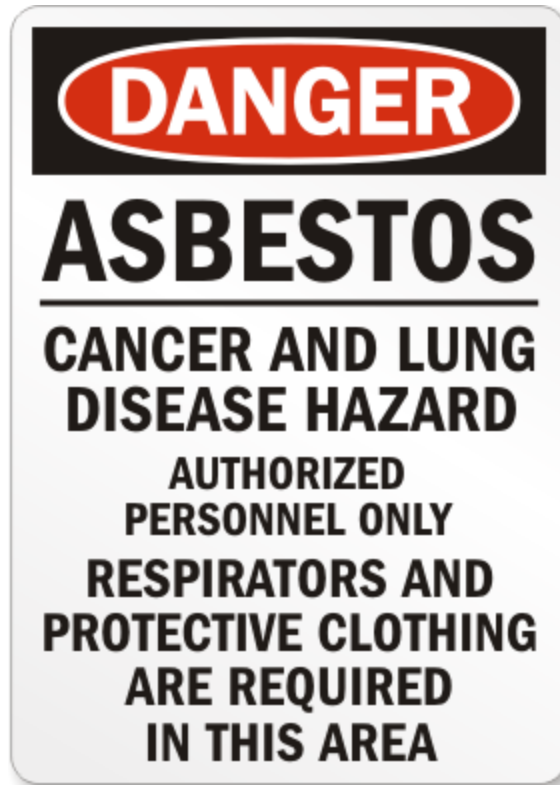
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- a. For abatements of regulated asbestos materials exceeding 10 linear feet or 15 square feet, the Michigan Department of Licensing and Regulatory Affairs (LARA) must be notified. This notification requires **10 calendar days**.
 - b. For abatements of regulated materials exceeding 260 linear feet or 160 square feet, the Michigan Department of Environmental Quality (MDEQ) must be notified. This notification requires **10 working days**.
2. Occupant Notification - EHS will notify workers in or adjacent to areas where asbestos activities will take place. EHS accomplishes this task by sending a written notice to the building administrators, deans, directors, and department heads for the area prior to abatement activities. The building contacts are then expected to convey the information to the affected persons.
- a. This notice is also sent to the Physical Plant administration who are instructed to inform trades, custodial employees and contractors, who may be working in the area.
 - b. Upon abatement completion and the receipt of the clearance from the environmental consultant, the same parties as listed above are notified of the abatement works completion.

K. Regulated Areas

1. Class I, II and III asbestos work must be conducted in a regulated area. Regulated areas require the following:
 - a. Shall be isolated from the rest of the workplace in any manner to minimize the number of persons exposed to asbestos.
 - b. Access to the area shall be limited to authorized personnel only. Generally, this is only the abatement contractor and environmental consultant staff. Accommodations for EHS and emergency response personnel will be made accordingly.
 - c. Eating, drinking, smoking, tobacco and gum chewing and the application of cosmetics is prohibited.
 - d. Respirators, as required by the abatement standard shall be provided to those entering the abatement area.
 - e. The following signage, or equivalent, must be posted:

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L. Methods of Abatement Compliance

Asbestos abatement contractors must follow industry standards for the abatement of asbestos and licensure. Engineering controls, work practices, HEPA filtered vacuums and exhaust ventilation, wet methods and other industry standards must be followed. Abatement contractors shall abide by the recommendations and requirements of the environmental consultant and when necessary EHS.

M. Respiratory Protection

1. EMU employees must comply with the EMU Respiratory Protection Program requirements. Abatement contractors are responsible for issuing their employee's respiratory protection and having a respiratory protection program.
2. Respiratory protections must be used during:
 - a. Periods necessary to install or implement feasible engineering and work-practice controls;
 - b. work operations, such as maintenance and repair activities, for which engineering and work-practice controls are not feasible;

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- c. work operations for which feasible engineering and work-practice controls are not yet sufficient to reduce asbestos exposure to or below the TWA and/or Excursion limit;
- d. in an emergency.

N. Protective Clothing and Equipment

1. If an employee will possibly be exposed to asbestos above the TWA or where the possibility of eye irritation exists, the employee shall be provided the appropriate protective work clothing and equipment such as, but not limited to:
 - a. Coveralls or similar full-body work clothing;
 - b. Gloves, head coverings, and foot coverings; and
 - c. Face shields, vented goggles, or other appropriate protective equipment complying with the EMU Personal Protective Equipment Program.
2. Abatement contractors are responsible for supplying their employees with the appropriate protective clothing and equipment for abatement work.
3. Personal protective clothing and equipment should be inspected on a routine basis.
 - a. Damaged coveralls, suits and gloves should be replaced immediately.
 - b. Damaged and/or contaminated protective clothing (coveralls, suits and gloves) should be disposed of with the asbestos waste.

O. Hygiene Facilities and Practices

1. Abatement contractors performing Class I, II and III abatement work are required to set up a decontamination area, including shower, when the quantity of TSI or surfacing materials exceeds 25 linear or 10 square feet and/or when the asbestos exposures exceed the PEL or excursion limit.
2. Eating and drinking is prohibited in the abatement work area. Breaks and lunches shall be taken in a separate area.
3. Abatement contractors shall wash their hands and face prior to consumption of food or beverage.
4. The use of tobacco is prohibited on the EMU campus.

P. Medical Surveillance

1. Since EMU employees do not perform Class I and II work and do not remove TSI or surfacing materials while performing Class III work, a medical

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surveillance program is not required. One will be implemented if these conditions change.

2. Abatement contractors are required to have a medical surveillance program.

Q. Training Requirements

There are four classes of asbestos work. Class I is the most hazardous type work and Class IV is for general maintenance and custodial work. EMU contracts all Class I and II work and the majority of Class III work. Some FMWs and Carpentry Shop employees are trained for Class III level work. The majority of EMU employees are Class IV trained. EHS coordinates the asbestos training for the campus. The training requirements are as follows:

1. Class I Training

Class I asbestos work is the most hazardous and involves the removal of thermal system insulation and sprayed-on or troweled-on surfacing asbestos containing materials or PACM. The initial training is 32 hours for worker level and 40 hours for competent person level. Annual refresher training is 8 hours.

2. Class II Training

Class II asbestos work includes the removal of other types of asbestos containing materials that are not thermal insulation, such as roofing materials, siding materials, flooring materials, lay-in style ceiling tiles or transite panels. The initial training is a minimum of 8 hours and includes hands-on training. Annual refresher training is required and the duration varies from 2-8 hours depending on the type of abatement work performed.

3. Class III Training

Class III asbestos work involves the disturbance of TSI or surfacing materials for the purpose of conducting repair or maintenance activities only. The initial training is 16 hours with hands on training with an annual minimum 2 hour refresher.

4. Class IV Training

Required for all maintenance and custodial staff working in buildings that have asbestos containing materials. Initial training is 2 hours with refreshers required annually.

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R. Housekeeping

1. Surfaces shall be maintained as free as practicable of ACM waste and debris and accompanying dust.
2. Spills and sudden releases of ACM shall be cleaned up as soon as possible. The spill/release area will be secured to prevent entry until clean-up occurs.
3. Surfaces contaminated with asbestos may not be cleaned using compressed air.
4. HEPA-filtered vacuuming equipment shall be used for vacuuming asbestos containing waste and debris. Custodial HEPA-filtered vacuums shall not be used to clean asbestos spills or debris.
5. Shoveling, dry sweeping and dry clean-up of asbestos may be used only where vacuuming and/or wet cleaning are not feasible. These methods can only be used by abatement contractors.
6. Asbestos for disposal, including waste, scrap, debris, bags, containers, equipment and clothing contaminated with asbestos, shall be collected and disposed of in sealed impermeable bags or other closed impermeable containers.
7. Contractors shall include asbestos disposal as part of their abatement work. Contractors shall dispose of asbestos waste in a Type II landfill that accepts asbestos and shall supply EHS with a copy of the final disposition record.
8. Asbestos-containing flooring materials must be cared for as follows:
 - a. Sanding of asbestos-containing floor material is prohibited.
 - b. Stripping of finishes shall be conducted using low abrasion pads at speeds lower than 300 RPM and wet methods.
 - c. Burnishing or dry buffing may be performed only on asbestos-containing flooring which has sufficient finish so the pad cannot contact the asbestos-containing material.

S. Recordkeeping

1. EHS maintains the asbestos survey, air monitoring, asbestos sampling data and employee exposure records. Survey, air monitor and sampling data are maintained indefinitely.
2. Employee exposure records must be maintained for the duration of employment plus 30 years.

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3. Asbestos training records will be maintained for a minimum of 1 year after the last date of employment.

VI. REFERENCES

- A. Asbestos for General Industry; Michigan Part 305
- B. OSHA 29. CFR 1910.1001
- C. OSHA 29 CFR 1926.1101 (ASHERA) 1987
- D. Michigan Training Guidelines for Asbestos Related Work Pursuant to 29 CFR 1926.1101; June 24, 1999
- E. NESHAPS – 40 CFR 61, Subpart M
- F. EPA Asbestos 40 CFR 763.2
- G. EMU Respiratory Protection Program
- H. EMU Personal Protective Equipment Program

VII. APPROVALS

| | | |
|----------------|-----------------------------------|------|
| Bilal Sarsour, | Director - Facilities Maintenance | Date |
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| Scott Storrar, | Director - Facilities Planning & Construction | Date |
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| Dieter Otto, | Director - Custodial Services | Date |
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| Kathryn Wilhoff, | Director - Environmental Health and Safety | Date |
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VIII. HISTORY

Rev. Change(s)

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| 0 | Initial release |
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