



THE CITY OF CLEVELAND, OHIO

CITYWIDE ASBESTOS POLICY AND PROGRAM MANUAL

May 19, 2017

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Before conducting any work involving building materials, the Project Manager shall be designated and will be responsible for the asbestos related protocols contained in this Policy Manual. This includes, but is not limited to, determining the presence or absence of asbestos-containing materials (ACM) or presumed ACM, assignment of the **Competent Person**, and notification of all employees affected by the work (e.g. remodeling, renovating, or repair work).

A “**Competent Person**” as defined in Section I(C) of this Cleveland City-Wide Asbestos Policy Manual **MUST** be involved prior to the initiation of any protocol(s) and/or procedures covered by this Policy Manual.

To determine the **Competent Person** for this site, refer to the Attachments for a list of contacts for this Building or Department.



Effective Date:
Last Revision Date:

May 19, 2017

I. PURPOSE AND BACKGROUND

A. Purpose

This policy manual has been created to assist department managers, property managers and other appropriate staff with understanding and managing asbestos-containing material (ACM) that may exist in City properties, including municipal buildings, offices and all other properties owned and/or managed by the City. The City is committed to providing a safe and healthful environment for all employees, tenants, contractors and visitors.

The purpose of this policy manual is to provide direction and assistance for City Property Managers. The goal is to prevent a release of asbestos fibers until ACM in a building is scheduled to be professionally removed prior to maintenance, renovation, or demolition activities. ACM must be properly managed in accordance with all federal, state, and local regulations to ensure the safety of employees, tenants, contractors and visitors.

This policy manual also satisfies the Public Employment Risk Reduction Program (PERRP) requirements, which reference all Federal Occupational Safety and Health Administration (OSHA) standards found in the Code of Federal Regulations (CFR) Title 29 Parts 1910 and 1926 as Ohio Employment Risk Reduction Standards.

B. Background

Asbestos is a general name for a group of six (6) naturally occurring minerals, which all possess the same properties. They have long, thin, flexible fibers that can be woven, high tensile strength, and resistance to chemical, thermal, and electrical degradation. They all act as good insulators. Due to the chemical and physical properties of asbestos, it is used for a variety of purposes and is present in many building materials. ACM is regulated in a variety of ways, especially in schools, but also in residential, municipal, and commercial buildings.

The physical condition and potential for disturbance of ACM generally determine the level of threat to the health of those exposed to it. When left intact and undisturbed, ACM does not pose a health risk to building occupants. If ACM is damaged, or easily releases fibers to air, then the ACM may be dangerous and proper measures must be taken to ensure that human health is not endangered. If it is stable and in good condition, it may be maintained in place for a very long time without posing a health concern. Removal of ACM without use of proper measures can actually create more of a hazard than leaving it in place. Unauthorized removal or disturbance of ACM is not only dangerous, it is also illegal.

Asbestos is common in many materials used in buildings constructed prior to 1980. Although not as commonly used after 1980, asbestos is not illegal and can still be found in building materials in use today. The following list of suspect materials is from the United States Environmental Protection Agency (EPA) and is intended to show the extent of asbestos use. Each building and material is different and the list below is not exhaustive.

- | | | |
|-----------------------------|------------------------------|-------------------------------|
| Cement Pipes | Construction Mastics | Thermal Paper Products |
| Elevator Brake Shoes | (floor tile, carpet, etc.) | Packing Materials |
| Cement Wallboard | Heating and Electrical Ducts | (for floor/wall penetrations) |
| HVAC Duct Insulation | Acoustical Plaster | Fire Doors |
| Cement Siding | Electrical Panel Partitions | High Temperature Gaskets |
| Boiler Insulation | Decorative Plaster | Caulking/Putties |
| Asphalt Floor Tile | Thermal Taping Compounds | Laboratory Hoods/Table Tops |
| Breaching Insulation | Textured Paints/Coatings | Adhesives |
| Vinyl Floor Tile | Electrical Wiring Insulation | Laboratory Gloves/Equipment |
| Ductwork | Ceiling Tile/Lay-in Panels | Wallboard |
| Flexible Fabric Connections | Chalkboards | Fire Blankets |



Vinyl Sheet Flooring	Spray-Applied Insulation	Joint Compounds
Cooling Towers	Roofing Shingles	Fire Curtains
Flooring Backing	Blown-In Insulation	Vinyl Wall Coverings
Pipe Insulation	Roofing Felt	Base Flashing
(corrugated air-cell, block, etc.)	Fireproofing Materials	Spackling Compounds

C. Definitions

Adequately Wet means to sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing materials, then that material has not been adequately wetted. However, the absence of visible emissions alone is not sufficient evidence of being adequately wet.

Aggressive Final Clearance means a final collection of air samples where floors, ceiling, and walls are swept with the exhaust of a one (1) horsepower leaf blower to dislodge any remaining dust and stationary fans are used (one for each 10,000 ft³ of worksite) to direct air toward the ceiling to create a “worst case” sampling scenario.

Aggressive Method means removal or disturbance of building material by sanding, abrading, grinding, or other method that breaks, crumbles, or disintegrates intact ACM.

Amended Water means water to which surfactant (wetting agent) has been added to increase the ability of the liquid to penetrate ACM.

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

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

Asbestos Hazard Abatement Activity means any activity involving the removal, renovation, enclosure, repair, or encapsulation of, specifically in the State of Ohio, friable ACM in an amount greater than 50 linear feet or 50 square feet.

Asbestos Hazard Abatement Contractor means a business entity or public entity that engages in or intends to engage in asbestos hazard abatement activities and that employs or supervises one (1) or more asbestos hazard abatement specialists for asbestos hazard abatement activities. Asbestos hazard abatement contractor does not mean an employee of an asbestos hazard abatement contractor, a general contractor who subcontracts to an asbestos hazard abatement contractor an asbestos hazard abatement activity, or any individual who engages in asbestos hazard abatement activity in his own home. Asbestos hazard abatement contractor shall not mean a business entity which engages in asbestos hazard abatement activities solely at its own place of business, provided that the business entity is required to and does comply with all applicable standards of the United States EPA and OSHA, and provided further that persons employed by the business entity performing asbestos hazard abatement activity meet the requirements of the Ohio Administrative Code 3701-34.

Asbestos Hazard Abatement Air Monitoring Technician means an individual licensed by the Ohio Department of Health (ODH) and responsible for environmental monitoring or work area clearance sampling. An Industrial Hygienist in Training (IHIT) or Certified Industrial Hygienist (CIH) is exempt from licensing by the ODH.

Asbestosis is the scarring of lung tissue resulting from exposure to asbestos.

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



Building/Facility Owner is the legal entity, including a lessee, which exercises control over management and record keeping functions relating to a building and/or facility in which activities covered by this standard take place.

Category I Non-Friable ACM means asbestos containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than 1% asbestos that cannot, when dry, be crumbled, pulverized, or reduced to powder by hand pressure.

Category II Non-Friable ACM means any material, excluding Category I non-friable ACM, containing more than 1% asbestos that cannot, when dry, be crumbled, pulverized, or reduced to powder by hand pressure.

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

Class II Asbestos Work means activities involving the removal of ACM, which is not thermal system insulation 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 means repair and maintenance operations, where ACM, including TSI and surfacing ACM and PACM may be disturbed.

Class IV Asbestos Work means 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.

Clean Room means an uncontaminated room having facilities for the storage of employees' street clothing and uncontaminated materials and equipment.

Closely Resemble means that the major workplace conditions, which have contributed to the levels of historic asbestos exposure, are no more protective than conditions of the current workplace.

Code of Federal Regulations (CFR) is the codification of the general and permanent rules and regulations (sometimes called administrative law) published in the Federal Register by the executive departments and agencies of the federal government of the United States.

Competent Person means, in addition to the definition in 29 CFR 1926.32 (f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f): in addition, for Class I and Class II work, who is specially trained in a training course which meets the criteria of EPA's Model Accreditation Plan (40 CFR part 763) for supervisor, or its equivalent and, for Class III and Class IV work, who is trained in a manner consistent with EPA requirements for training of local education agency maintenance and custodial staff as set forth at 40 CFR 763.92 (a)(2).

Critical Barrier means one (1) or more layers of plastic sealed over all openings into a work area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in a work area from migrating to an adjacent area.

Decontamination Area means an enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area, and clean room, which is used for the decontamination of workers, materials, and equipment that are contaminated with asbestos.

Demolition means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.



Disturbance means activities that disrupt the matrix of ACM or PACM, crumble or pulverize ACM or PACM, or generate visible debris from ACM or PACM. This term includes activities that disrupt the matrix of ACM or PACM, render ACM or PACM friable, or generate visible debris. Disturbance includes cutting away small amounts of ACM or PACM, no greater than the amount which can be contained in one (1) standard sized glove bag or waste bag in order to access a building component. In no event shall the amount of ACM or PACM so disturbed exceed that which can be contained in one (1) glove bag or waste bag, which shall not exceed 60 inches in length and width.

Emergency Renovation Operation means a renovation operation that was not planned but results from a sudden, unexpected event that, if not immediately attended to, presents a safety or public health hazard, is necessary to protect equipment from damage, or is necessary to avoid imposing an unreasonable financial burden. This term includes operations necessitated by non-routine failures of equipment.

Employee Exposure means that exposure to airborne asbestos would occur if the employee were not using respiratory protective equipment.

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

Environmental Protection Agency (EPA) is an agency of the U.S. federal government which was created for the purpose of protecting human health and the environment by writing and enforcing regulations based on laws passed by Congress.

Equipment Room (change room) means a contaminated room located within the decontamination area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.

Excursion Limit means airborne concentrations of asbestos in excess of 1.0 fibers per cubic centimeter (f/cc) of air as averaged over a sampling period of 30 minutes.

Facility means any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative, but excluding residential buildings having four (4) or fewer dwelling units); any ship; and any active or inactive waste disposal site. For purposes of this definition, any building, structure, or installation that contains a loft used as a dwelling is not considered a residential structure, installation, or building. Any structure, installation, or building that was previously subject to this subpart is not excluded, regardless of its current use or function.

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

Friable means material that when dry, may be crumbled, pulverized, or reduced to powder by hand pressure.

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

Grinding means to reduce to powder or small fragments and includes mechanical chipping or drilling.

High-Efficiency Particulate Air (HEPA) Filter means a filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter.

Homogeneous Area means an area of surfacing material or thermal system insulation that is uniform in color and texture.



Industrial Hygienist means a professional qualified by education, training, and experience to anticipate, recognize, evaluate, and develop controls for occupational health hazards.

Inspection means an activity undertaken in a school building, or a public and commercial building, to determine the presence or location, or to assess the condition of, friable or non-friable asbestos-containing building material (ACBM) or suspected ACBM, whether by visual or physical examination, or by collecting samples of such material.

Intact means that the ACM has not crumbled, been pulverized, or otherwise deteriorated so that the asbestos is no longer likely to be bound with its matrix.

Mesothelioma is a rare form of cancer related to asbestos exposure.

Miscellaneous Material means building material on structural components, structural members or fixtures, such as floor and ceiling tiles, and does not include surfacing material or thermal system insulation.

Negative Exposure Assessment (NEA) means a demonstration by the employer that employee exposure during an operation is expected to be consistently below the PELs.

National Emissions Standard Hazardous Air Pollutants (NESHAP) are stationary source standards for hazardous air pollutants. Hazardous air pollutants (HAPs) are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects.

Owner or Operator of a Demolition or Renovation Activity means any person who owns, leases, operates, controls, or supervises the facility being demolished or renovated or any person who owns, leases, operates, controls, or supervises the demolition or renovation operation, or both.

PACM means "presumed asbestos-containing material".

Permissible Exposure Limit (PEL) is the maximum allowable exposure to asbestos at 0.1 fibers per cubic centimeter of air as an eight (8) hour time-weighted average

Presumed Asbestos Containing Material means thermal system insulation and surfacing material found in buildings constructed no later than 1980.

Project Designer means a person who has successfully completed the training requirements for an abatement project designer established by 40 U.S.C. Sec. 763.90(g).

Regulated Area means an area established by the employer to demarcate areas where Class I, II, and III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos, exceed or there is a reasonable possibility they may exceed the permissible exposure limit. Requirements for regulated areas are set out in **Section III (F)(3)** of this policy manual.

Regulated Asbestos-Containing Material (RACM) means (a) Friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non-friable 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 40 CFR 61 (NESHAP).

Removal means all operations where ACM and/or PACM is taken out or stripped from structures or substrates, and includes demolition operations.

Renovation means altering a facility or one or more facility components in any way, including the stripping or removal of RACM from a facility component.



Repair means overhauling, rebuilding, reconstructing, or reconditioning of structures or substrates, including encapsulation or other repair of ACM or PACM attached to structures or substrates.

Surfacing Material means 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) means material applied to pipes, fittings, boilers, breeching, tanks, ducts, or other structural components to prevent heat loss or gain.

Time-Weighted Average (TWA) means airborne concentrations of asbestos in excess of 0.1 f/cc of air as an eight (8) hour time-weighted average.

Visible Emissions means any emissions, which are visually detectable without the aid of instruments, coming from RACM or asbestos-containing waste material, or from any asbestos milling, manufacturing, or fabricating operation. This does not include condensed, uncombined water vapor.

D. Applicable Regulations

This policy manual has been prepared to ensure compliance with the following regulations:

- Ohio Department of Health – Ohio Administrative Code (OAC) Final Rule 3701-34 - Asbestos Hazard Abatement Contractors, Specialists, & Other Professionals
- United States (U.S.) Environmental Protection Agency (EPA) – Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAPS), 40 Code of Federal Regulation (CFR), Part 61, Subpart M – National Emission Standard for Asbestos
- U.S. EPA – Asbestos Hazard Emergency Response Act (AHERA), 40 CFR, Part 763, Subpart E – Asbestos Containing Materials in School
- Ohio EPA – OAC 3745-20, Asbestos Emission Control
- OAC 4167 Public Employment Risk Reduction Program (PERRP)
- Occupational Safety and Health Administration (OSHA) – 29 CFR 1926.1101 – Asbestos Construction Standard
- OSHA – 29 CFR 1910.1001 – Asbestos (General Industry)

The policy manual also includes information from the following reference materials:

- Guidance for Controlling Asbestos-Containing Materials in Buildings, (EPA Purple Book)
- Managing Asbestos In Place, A Building Owners Guide to Operations and Maintenance
- Guidance Manual: Asbestos Operations & Maintenance Work Practices, National Institute of Building Sciences, 2nd Edition
- Programs for Asbestos-Containing Materials, (EPA Green Book)



II. MANAGING ASBESTOS

A. Non-Certified/Trained Individuals

Any individuals not trained or certified in asbestos management or removal should not disturb or clean up materials identified as ACM or presumed ACM (PACM). If a release of an unidentified material is encountered by non-trained persons, these persons should notify either their immediate supervisor or Maintenance/Custodial Staff trained to recognize and handle ACM and/or PACM.

B. Maintenance/Custodial Staff

These persons must receive training by the City of Cleveland (the City) in accordance with 29 CFR 1926.1101 – Asbestos Construction Standard and 29 CFR 1910.1001(j)(7)(iv) – Asbestos General Industry Standard, Employee Information and Training. This general awareness training of at least two (2)-hours allows these individuals to understand asbestos use and forms and the associated health risks from exposure. These persons are to be made aware of the quantity, location, and condition of ACM and PACM within the buildings for which they are responsible. They are to understand and implement a proper response to a fiber release episode and be trained at least once a year. Refer to **Section III(C)** of this policy manual for detailed information regarding this training.

The maintenance/custodial staff may respond to falling or dislodging of up to three (3) square or linear feet of ACM or PACM in accordance with 40 CFR 763.91(f)(1) - Minor Fiber Release Episode procedures. These persons must notify the Competent Person if a fiber release episode greater than this amount is encountered. However, a Competent Person **MUST** be involved prior to the initiation of any protocol(s) and/or procedures covered by this Policy Manual. To determine the Competent Person for this site, refer to the attached Appendix for a list of contacts for this Building or Department.

C. Competent Person

The Competent Person is defined in **Section I** of this policy manual. The Competent Person shall have an initial 40 hours of training and maintain an annual eight (8)-hour refresher course. The Competent Person will be responsible for the following:

- Maintain this policy manual and revise it as necessary.
- Assure that information and procedures within this policy manual are followed by all persons.
- Provide training to newly hired employees who are determined to be maintenance/custodial staff or who will have encounters with ACM or PACM.
- Coordinate the testing and analysis of newly identified suspect ACM and determine the appropriate measures of managing the materials.
- Maintain records of all building surveys, material sampling, training, abatement activities, air monitoring, and negative exposure assessments.
- Provide technical review of scope, design, and/or specifications for asbestos abatement projects.

To determine the Competent Person for this site, refer to **Attachment A** for a list of contacts for this Building or Department.

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D. Hired Contractors

The Competent Person shall ensure that all hired contractors (e.g., electricians, plumbers, etc.) working at a building be made aware of the presence, quantity, and location of ACM or PACM in the area they are to be working. These contractors should not disturb or clean any ACM or PACM within their specified scoped area unless they are trained and properly licensed to do so.

Contractors hired to perform the demolition, renovation or repair activities must do so in accordance with all applicable asbestos laws and regulations. Refer to **Section III(B)** of this program manual for additional information.

Additionally, these contractors must submit required notification to the Ohio EPA and/or ODH prior to beginning the work activities.

These persons will stop work immediately and contact the Competent Person if a previously unidentified material is discovered within their specific scoped area.

E. Hired Asbestos Abatement Contractors

These persons shall follow all provisions of the applicable regulations governing asbestos operations, project-specific asbestos abatement specifications, and this policy manual.

The scope of work conducted by these persons will be coordinated through the Competent Person.

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III. GENERAL ASBESTOS COMPLIANCE

This policy manual applies to all building materials containing asbestos as defined in this policy manual and all abatement related activities performed on or near ACM. Asbestos work is divided into four (4) Classes under 29 CFR 1926.1101 – Asbestos Construction Standard, which are described below:

- **Class I Asbestos Work** means activities involving the removal of thermal system insulation (TSI) and surfacing ACM and PACM.
Examples: removal of piping insulation typically found in boiler rooms or utility chases; removal of spray-on fire proofing that would be found on structural members or ceilings of the building.
These materials can be easily crumbled and resist the transfer of heat from a source into an occupied space.
- **Class II Asbestos Work** means activities involving the removal of ACM, which is not TSI or surfacing material.
Examples: removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.
- **Class III Asbestos Work** means repair and maintenance operations, where ACM (including TSI and surfacing ACM and PACM) is likely to be disturbed.
Examples: disturbing piping insulation to repair or replace several fittings on the pipe that is being insulated.
- **Class IV Asbestos Work** means 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.

Coverage under this policy manual shall be based on the nature of the work operation involving asbestos exposure.

A. What To Do If ACM Is Suspected

The City has a large number of buildings that were constructed prior to the 1980s, during which time asbestos was more commonly used and building materials were more likely to be ACM.

ACM may have been previously investigated and/or identified. The following resources may be available to determine the presence of ACM or PACM. These resources should be reviewed by the Competent Person (as defined in Section I of this Policy Manual) who has the training and licensure as listed in Section III(C). The Competent Person may be a City employee or properly licensed outside contractor. Refer to **Attachment A** for the Competent Person assigned to this building or department.

- Building Plans/Drawings/Specifications,
- Asbestos Inspections/Surveys and Reports (included as **Attachment B**, if available),
- Asbestos Abatement Records, and
- Operations & Maintenance Plans (O&M Plan, included as **Attachment C**, if available).

If there are no records available, the following steps must be arranged or completed by the Competent Person:

- Presume the material to contain asbestos, or
- Test the material to determine asbestos content, or
- Conduct an asbestos survey of the building.



Testing of materials or building surveys must be coordinated through the Competent Person and must be conducted by a properly licensed City employee or a properly licensed environmental consultant.

Only *Asbestos Hazard Evaluation Specialists* (as defined in Section III (C), below) may collect bulk asbestos samples in the State of Ohio. All sample collecting must be done in accordance with Ohio Department of Health regulations (as referenced 40 CFR 763.86 – Sampling). As a conservative approach, plaster walls and ceilings are recommended to be sampled as a surfacing material in accordance with 40 CFR 763.86(a) – Sampling of Surfacing Material.

B. Hazard Communication

Building Occupants & Contractors

Hazards associated with asbestos-containing materials should be included in the City's Hazard Communication program (as required by 29 CFR 1910.1200). Before conducting any work involving building materials, the following shall be notified by the Competent Person or Project Manager of the presence, location, and quantity of ACM and/or PACM:

- Prospective employers applying or bidding for work whose employees may be expected to work in or adjacent to areas containing ACM and/or PACM.
- Contractors hired to work in or adjacent to areas containing ACM and/or PACM.
- Employees who may work in or adjacent to areas containing this material as well as building occupants who may incidentally come in contact with ACM and/or PACM.
- Tenants who occupy spaces containing ACM and/or PACM.

In addition, the City shall post warning signs at the entrance of areas with known ACM and/or PACM describing the asbestos hazard for cancer and lung effects, type of material present, its location within the area, and appropriate work practices.

Warning labels shall be affixed to all raw materials, mixtures, scrap, waste, debris, and other products containing asbestos fibers, or their containers. The intent of these postings is to ensure that ACM and/or PACM will not be disturbed.

Examples of required warning signs and labels are included as **Attachment D**.

C. Training and Licensure

Training is required for all employees who perform Class I through Class IV asbestos work. The training must meet the requirements of the EPA Model Accreditation Plan (MAP) 40 CFR Part 763 appendix C to subpart E. As stated in **Section II** of this policy manual, ***no untrained workers are to disturb any amount of asbestos.***

To obtain licensure for asbestos work in Ohio, the individual must first complete a required number of hours of training from a certified training provider. Once the training has been completed and the individual has passed a test demonstrating their knowledge, the individual may then apply for a license from the State of Ohio Department of Health (ODH).

The State of Ohio issues five (5) types of licenses relating to asbestos work. The licenses and their corresponding MAP training requirements are described below:

- **Asbestos Hazard Abatement Worker (AHAW):** This license requires, at a minimum, the Worker (32 hours) initial training under the MAP and annual refresher training. A person holding this license may perform asbestos hazard abatement activities only.
- **Asbestos Hazard Abatement Specialist (AHAS):** This license requires the Contractor/Supervisor (40 hours) initial training and annual refresher training. This person may supervise, coordinate, oversee, and/or perform asbestos hazard abatement activities. This person may also perform personal air sampling during abatement projects. The Competent Person must have this training or an equivalent.



- **Asbestos Hazard Evaluation Specialist (AHES):** This license requires the Inspector AND the Management Planner initial training (total 40 hours) and annual refresher training. This person may identify, detect, and assess ACM. This person may also determine response actions and prepare management plans for abatement activities. During abatement activities, this person may perform environmental air monitoring and personal air monitoring. At the completion of abatement activities, they may conduct the final visual assessment and the final clearance sampling.
- **Asbestos Hazard Project Designer (AHPD):** This license requires the Project Designer (24 hours) initial training and annual refresher training. This person may determine a scope of work, work sequence, or performance standards for asbestos hazard abatement activities. They may also oversee asbestos hazard abatement activities.
- **Asbestos Air Monitoring Technician (Air Technician):** This license is specific to the Ohio Department of Health and does not correlate to any MAP training requirements. This person may only perform final visual inspections and conduct final air clearance sampling at the completion of an asbestos hazard abatement project.

In accordance with 29 CFR 1910.1001(j)(7) - Employee Information and Training, a training program shall be instituted for all employees who are exposed to airborne concentrations of asbestos at or above the PEL and/or excursion limit and ensure their participation in the program. This training shall be conducted by a qualified instructor prior to or at the time of initial assignment and at least annually thereafter. The training program shall be conducted in a manner which the employees are able to understand, and shall include the following:

- The health effects associated with asbestos exposure,
- The relationship between smoking and exposure to asbestos producing lung cancer,
- The quantity, location, manner of use, release, and storage of asbestos, and the specific nature of operations which could result in exposure to asbestos,
- The engineering controls and work practices associated with the employee's job assignment,
- The specific procedures implemented to protect employees from exposure to asbestos, such as appropriate work practices, emergency and clean-up procedures, and personal protective equipment to be used,
- The purpose, proper use and limitation of respirators and protective clothing, if appropriate,
- The purpose and description of the medical surveillance program,
- The names, addresses, and phone numbers of public health organizations which provide information, materials, and/or conduct programs concerning smoking cessation, and
- The requirements for posting signs and affixing labels and the meaning of the required legends for such signs and labels.

D. Housekeeping

All surfaces shall be maintained as free as practicable of ACM waste, debris, and accompanying dust.

Surfaces contaminated with asbestos may not be cleaned using compressed air. Do not drill holes, hammer nails into, hang objects from, touch with curtains, or move furniture that damages ACM or PACM. Waste, debris, and accompanying surface dust in areas containing accessible



and/or visibly deteriorated ACM, shall not be dusted, swept, shoveled dry, or vacuumed without using a HEPA filter. When vacuuming methods are selected, HEPA filtered vacuuming equipment must be used. The equipment shall be used and emptied in a manner that minimized the reentry of asbestos into the workplace or atmosphere.

Asbestos waste, scrap, debris, bags, containers, equipment, and contaminated clothing designated for disposal shall be collected, maintained in a wet state, and disposed of in sealed, labeled, impermeable bags or other closed, labeled impermeable containers.

E. Medical Surveillance

All employees who, for a combined total of 30 or more days per year, are engaged in a Class I, II, or III activities, or, exposed at or above the OSHA PELs shall be enrolled in a comprehensive medical surveillance program.

All medical examinations and procedures must be performed by or under the supervision of a licensed physician and are provided at no cost to the employee and at a reasonable time and place.

The frequency of medical examinations shall meet the following requirements:

- When employees are assigned to an area where exposures to asbestos may be at or above the OSHA PELs for 30 or more days per year or engaged in Class I, II, or III work for a combined 30 or more days per year, a medical examination must be given within 10 working days following the 13th day of exposure.

NOTE: Exams are required annually thereafter. If the physician decides that an exam should be provided more frequently than annually, the City shall provide such examination as recommended.

Each medical exam shall consist of the following:

- A medical and work history with special emphasis directed to the pulmonary, cardiovascular, and gastrointestinal systems.
- On initial examination, the standardized questionnaire contained in Part 1 of Appendix D to 29 CFR 1926.1101, and on annual examination, the abbreviated standardized questionnaire contained in Part 2 of Appendix D to 29 CFR 1926.1101.
- A physical examination directed to the pulmonary and gastrointestinal systems, including a chest roentgenogram (X-ray photograph) to be administered at the discretion of the physician and pulmonary function tests of forced vital capacity (FVC) and forced expiratory volume at one (1) second (FEV1).

Information provided to the physician must include:

- A copy of 29 CFR 1926.1101 – Asbestos Construction Standard and Appendixes D (Medical questionnaires), E (Interpretation and classification of chest roentgenograms), and I (Medical surveillance guidelines for asbestos) to 29 CFR 1926.1101.
- A description of the employee's duties as they relate to exposure.
- The employee's representative exposure level or anticipated exposure level.
- A description of Personal Protective Equipment and respiratory equipment used or to be used.
- Information from previous medical examinations of the affected employee that is not otherwise available to the examining physician.

The City shall provide a copy of the physician's written opinion to the affected employee within 30 days of its receipt.



F. Asbestos Hazard Abatement Projects

1. Project Design

Certain asbestos abatement activities warrant development of a comprehensive project design. The Competent Person shall be responsible for determining if a comprehensive project design is required. The project design will define the expectations of the City, the requirements of the work, and the scope of the project, and can ultimately be used as part of the bid process. If the Competent Person determines that a project is simple enough that no project design is required, a "scope of work" letter may be all that is needed. The determination to prepare a formal specification or scope of work will be made on a case-by-case basis by the Competent Person. If formal specification documents are produced for a project, they must be prepared by an AHPD.

2. Notification and Communication

Ohio Department of Health (ODH)

The ODH must be notified by the Competent Person or Project Manager of all asbestos hazard abatement activities of Regulated Asbestos-Containing Material in an amount greater than 50 linear feet or 50 square feet.

The ODH must be notified at least 10 business days before beginning each planned asbestos hazard abatement project.

All notification(s) must be made using ODH's "Prior Notification of Asbestos Hazard Abatement Project Form." A copy of the Notification form is included in **Attachment E**.

Ohio Environmental Protection Agency (OEPA)

The OEPA must be notified by the Competent Person or Project Manager in writing at least 10 business days before any demolition or renovation activities. The following activities must be specifically noted on the notification:

- If the amount of RACM in a facility being demolished is at least 260 linear feet on pipes or at least 10 square feet on other facility components. In addition, 35 cubic feet of facility components where the length or area could not be measured.
- If the amount of RACM in a facility being demolished is less than 260 linear feet on pipes, less than 160 square feet on other facility components, or less than 35 cubic feet of facility components modified notification requirements apply.
- If the facility is being demolished under an order of the State or local governmental agency, issued because the facility is structurally unsound and in danger of imminent collapse, Cleveland Department of Public Health must be notified as early as possible before, but no later than, the following workday if the operation is a demolition.
- In a facility being renovated, including any nonscheduled renovation operation, if the amount of RACM to be stripped, removed, dislodged, cut, drilled or similarly disturbed is at least 260 linear feet on pipes or at least 160 square feet on other facility components or 35 cubic feet of facility components where the length or area could not be measured.

All notification(s) must be made using the OEPA's "Notification of Demolition and Renovation" form. The completed attachment must be sent to one (1) of the local enforcement agencies based on job location. A copy of the Notification form is included in **Attachment F**.



Job Location	Contact Information
Cuyahoga, Geauga, or Lorain County	Ohio EPA/DAPC Northeast Ohio District Office 2110 E. Aurora Road Twinsburg, Ohio 44087
Medina, Portage, or Summit County	Akron Regional Air Quality Management 146 S. High Street, Suite 904 Akron, Ohio 44308
Lake County	Lake County General Health District Air Pollution Control 33 Mill Street Painesville, Ohio 44077

3. Regulated Areas

All Class I, II, and III asbestos work shall take place within regulated areas by a licensed Asbestos Hazard Abatement Contractor. All regulated areas shall comply with the following requirements:

- Contractors hired by the City must follow all federal, state, and local asbestos abatement statutes, codes, regulation, and rules.
- All regulated areas shall be marked with signs, caution/warning tape, and/or critical barriers. Signs shall be provided and displayed at such a distance from the area that an employee may read the signs and take the necessary stopes before entering. Signs shall bear the following information:

DANGER
ASBESTOS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
AUTHORIZED PERSONNEL ONLY

Examples of required warning signs and labels are included as **Attachment D**.

- Access to regulated areas shall be limited to authorized personnel.
- All employees are prohibited from eating, drinking, and smoking, chewing tobacco or gum, or applying cosmetics (including lip balm and sunscreen) in regulated areas.
- All work done within a regulated area must be supervised by a Competent Person as defined by this policy manual.

4. Respiratory Protection

The Competent Person shall determine the proper protective clothing and respiratory protection for employees assigned to work in Class I, II, III and IV work. All employees must be provided with proper protective clothing and respirators when assigned to work in Class I, II, III and IV work. The City maintains a respiratory protection program for its employees in accordance with OSHA 29 CFR 1910.134 – Respiratory Protection Standard and 29 CFR 1926.1101(h) - Respiratory Protection and that program is incorporated by reference in this policy.

The Competent Person may elect to obtain a negative exposure assessment for additional guidance on the selection of proper protective clothing and respiratory protection. Details regarding the negative exposure assessments are discussed in the following section.



5. Negative Exposure Assessment

To obtain a negative exposure assessment for any one (1) specific job, the Competent Person or qualified vendor must demonstrate that employee exposures will be below PELs by one (1) of the following methods:

- Objective data demonstrating that the product or material containing asbestos or the activities involving such product cannot release airborne fibers in concentrations exceeding the PELs under those work conditions having the greatest potential for releasing asbestos.

NOTE: Work practices conforming to the Resilient Floor Covering Institute's "Recommended Work Practices for Removal of Resilient Floor Coverings" or the National Roofing Contractor's Association would meet this requirement assuming that all work practices identified in the documents are followed.

- Collect air samples from within the breathing zone of workers within a regulated area. These air samples are referred to as personal air samples and should be collected during work "closely resembling" activities from the past year.

NOTE: In order to be considered "closely resembling" the following must be similar: processes, type or material being abated, control methods, work practices, environmental conditions and employee training level.

- The result of exposure sampling, which is from the current job and is representative of eight (8)-hour and 30-minute exposures of each employee, are below the PELs. In accordance with 29 CFR 1926.1101(f)(2)(ii) - Initial Exposure Assessment, the City shall presume that employees are exposed in excess of the TWA and excursion limit for Class I asbestos work until negative exposure of the current job is demonstrated.

6. Project Clearance Levels and Sampling

All project clearance sampling shall meet the following requirements if deemed necessary by the Competent Person and/or Project Designer.

- All clearance air sampling to be analyzed by phase contrast microscopy (PCM) shall be conducted in accordance with the National Institute of Occupational Safety and Health's (NIOSH) analytical method 7400 (entitled "Fibers" 3rd edition, 1987). A minimum of three (3) samples shall be taken inside of the work area and show that the concentration of fibers for each sample is less than or equal to a limit of quantification for PCM of 0.01 fibers per cubic centimeter (fibers/cc) of air.
- All clearance air sampling to be analyzed by Transmission Electron Microscopy (TEM) shall be conducted in accordance with 40 CFR Part 763, Subpart E, Appendix A - Interim Transmission Electron Microscopy Analytical Methods - Mandatory and Nonmandatory - and Mandatory Section To Determine Completion of Response Actions.
- All clearance air sampling shall be conducted by an Air Technician, AHES or Certified Industrial Hygienist (CIH).

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G. Recordkeeping Requirements

Unless otherwise specified in this policy manual, all records required by this section must be kept for the duration of an employee’s employment with the City plus 30 years.

1. Objective Data

When the City has relied on objective data to demonstrate that products made from or containing asbestos or the activity involving such products or material are not capable of releasing fibers of asbestos in excess of exposure limits, a record shall be maintained which includes the following information:

- The product qualifying for exemption.
- The source of the objective data.
- The testing protocol, results of testing, and/or analysis of the material for the release of asbestos.
- A description of the operation exempted and how the data supports the exemption.
- Other data relevant to the operations, materials, processing or employee exposures.

2. Exposure Measurements

The City shall keep an accurate record of all measurements taken to monitor employee exposures to asbestos. All exposure measurements records shall include the following information:

- Date of measurement.
- The operations involving exposure to asbestos.
- Sampling and analytical methods used and evidence of their accuracy.
- Number, duration, and results of samples taken.
- Type of protective equipment worn, if any.
- Name, social security number, and exposure of the employees whose exposures are represented.

3. Medical Surveillance

The City shall keep an accurate record for each employee subject to medical surveillance. The record shall include the following information:

- The name and social security number of the employee.
- A copy of the employee’s medical examination results, including the medical history, questionnaire responses, results of any tests and physician’s recommendations.
- Physicians’ written opinions.
- Any employee medical complaints related to exposure to asbestos.
- A copy of the information provided to the physician in accordance with this policy manual.

A copy of the Employee Exposure & Medical Record Access Policy is included as **Attachment G**.



4. Waste Material Transported Offsite

All waste shipment records must be maintained by the Project Manager for at least two (2) years and must contain the following information:

- The name, address, and telephone number of the waste generator.
- The name and address of the Cleveland Health Department.
- The approximate quantity in cubic meter or cubic yards.
- The name and telephone number of the disposal site operator.
- The name and physical site location of the disposal site.
- The date transported.
- The name, address, and telephone number of the transporter.

A copy of the waste shipment record shall be provided to the disposal site owner or operator at the same time as the waste material is delivered.

For waste shipments where a copy of the waste shipment record, signed by the owner or operator of the disposal site, is not received by the Project Manager within 35 days of the date the waste was accepted by the transporter, the transporter and/or disposal site owner shall be contacted to determine the status of the waste shipment.

The Project Manager shall report in writing to the Cleveland Health Department if a copy of the waste shipment record, signed by the owner of the disposal site, is not received within 45 days of the date the waste was accepted by the transporter.

H. Emergency Response Procedures

A fiber release episode is defined as: any uncontrolled or unintentional disturbance of ACM or PACM resulting in visible emission or debris. The likelihood of an emission depends on the friability of the material as well as the physical condition, which includes the state of deterioration and/or delamination, physical damage, or water damage.

A minor fiber release episode is defined as: the falling or dislodging of three (3)-square or linear feet or less of friable ACM.

A major fiber release episode is defined as: the falling or dislodging of greater than three (3)-square or linear feet of friable ACM. In the event of any asbestos fiber release episode, the following procedures should be immediately followed:

- Exit the area and restrict access by others by posting appropriate warning signs.
- Notify the Competent Person.
- Shut down the HVAC system serving the area.
- Do not attempt to clean unless properly trained in accordance with **Section II (B)** of this policy manual.

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ATTACHMENT A CONTACT LIST

The City Commissioner of Property Management is the designated primary competent person for asbestos inspection. In lieu of the availability of the commissioner, the city will utilize certified available staff from various other departments that maintain State of Ohio licensure in Asbestos Building Inspection and Mgt. Planning.



**ATTACHMENT B (EXAMPLE)
PRE-RENOVATION
ASBESTOS INSPECTION REPORT**



**ATTACHMENT C (EXAMPLE)
ASBESTOS OPERATION
AND MAINTENANCE PLAN**



**ATTACHMENT D (EXAMPLE)
EXAMPLES OF REQUIRED WARNING SIGN & LABEL**



Example of a Posted Warning Sign



Example of a Posted Warning Label





**ATTACHMENT E
ODH PRIOR NOTIFICATION OF ASBESTOS HAZARD
ABATEMENT PROJECT FORM (HEA 5121)**



**ATTACHMENT F
OHIO EPA NOTIFICATION OF DEMOLITION
AND RENOVATION FORM**



**ATTACHMENT G
EMPLOYEE EXPOSURE & MEDICAL
RECORD ACCESS POLICY**