

**UNIVERSITY OF ROCHESTER
ENVIRONMENTAL HEALTH & SAFETY**

Procedure No.: AC003	Approved by: Mark Cavanaugh
Title: Asbestos Management for Construction Activities	Date: 1/28/2016
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I. PURPOSE

Asbestos or Asbestos Containing Material (ACM) does not present a hazard if it is in good condition and remains intact. It becomes a potential health hazard when the material is disturbed and becomes friable. Potentially hazardous conditions can occur when the material becomes damaged, airborne and respirable. This can arise from daily elements of physical or mechanical pressure or through abatement (removal) of the material.

This program provides *minimum* guidance to Campus Planning Design and Construction Management (CPDCM) staff, Medical Center/River Campus (MC/RC) Construction Groups and Real Estate Services Project Managers to assure that asbestos containing material is being properly identified and managed in accordance with applicable regulations to help assure that a safe environment is provided for University students, staff, visitors, patients and contractors.

Recognize that activities in which asbestos or suspected asbestos containing materials is abated, disturbed or fabricated must not be performed by maintenance, telecommunications, laboratory, housekeeping or other university personnel without specific authorization, explicit instructions and the necessary certifications. Such activities include, but are not limited to, drilling, cutting, sanding, breaking or sawing asbestos containing materials.

II. PERSONNEL AFFECTED

This program applies to any construction or renovation activity in any UR owned buildings or UR managed construction projects.

For many years asbestos was used in the construction industry due to its unique properties of resistance to heat, fire, chemical, and moisture erosion. It is because of those properties that asbestos containing materials were used in a variety of ways in building construction and products, including (but not limited to):

- Drywall and drywall compound
- Fireproofing
- Popcorn ceilings
- Plaster walls and ceilings
- Floor tiles
- Floor tile or wall covering adhesive
- Laboratory counter tops
- Chemical fume hood liners
- Window, door or other caulking
- Electrical wiring
- Duct work
- Steam, chill water pipe line

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- Roofing materials
- Fire Blankets
- Suspended ceiling tiles
- coverings
- Gaskets
- Curtains and draperies
- Acoustical panels or tiles

A survey to include the identification of known or suspect asbestos containing materials must be conducted before any work involving demolition, renovation, repair, installations or wall penetrations commences. The survey must be conducted for the entire work area and by a New York State Code Rule 56 Certified Inspector.

The Asbestos Control Group shall be notified of all discoveries of disturbed asbestos material or work involving asbestos containing material or presumed asbestos containing material prior to the start of any such work.

III. DEFINITIONS

Abatement. Procedures to control fiber release from asbestos material. This includes removal, encapsulation, enclosure or repair.

Abatement Contractors. Any CPDCM approved prequalified abatement contractors http://www.rochester.edu/cpdcmm/prequal/Pre_Qualified_Contractor_list_05_07_15.pdf or abatement contractors approved by the Asbestos Control Group.

Asbestos. Any naturally occurring hydrated mineral silicate separable into commercially usable fibers, including chrysotile (serpentine), amosite (cummingtonite-grunerite), crocidolite (riebeckite), tremolite, anthrophyllite and actinolite.

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

Asbestos Control Group (ACG). The University group responsible for asbestos regulatory oversight for the University. ACG reports to EHS through Occupational Safety and includes Asbestos Control Managers. This oversight must conform to the regulations set forward by OSHA and the NYSDOL.

Campus Planning Design and Construction Management (CPDCM). A professional unit that provides planning and project management services to the university community through design and construction solutions.

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Disturbance. Any activities that disrupt the matrix of ACM or PACM, or generate debris, visible emissions or airborne asbestos fibers from ACM or PACM. This includes moving of friable asbestos containing material from one place to another.

EHS. Environmental Health & Safety

Environmental Laboratory Approval Program (ELAP). A laboratory certified in NYS for performing analysis for Asbestos and Fibers by optical microscopy identifies bulk asbestos using polarized light microscopy (PLM) and fibers in air using phase contrast microscopy (PCM). All environmental laboratories analyzing samples from the State of New York must be certified. For an approved vendors list see the Asbestos Control web site.

Environmental Air Sampling Laboratories. For an approved vendors list of air sampling laboratories see the Asbestos Control web site.

Friable. Any dry asbestos containing material that is easily crumbled, pulverized, or reduced to powder by hand pressure and is capable of being released into the air.

HEPA Filter. A high efficiency particulate air filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 microns in diameter.

Incidental Disturbance. The unintentional disturbance of ACM, PACM, or asbestos material

Non-Friable. Dry asbestos containing material that can't be crumbled, pulverized, or reduced to powder by hand pressure and is not capable of being released into the air by hand pressure, unless subjected to sanding, grinding, cutting or other breakage.

Non-Friable Organically Bound (NOB) Asbestos Material. Non-friable asbestos materials embedded in flexible-to-rigid asphalt or vinyl matrices. These materials include flooring materials, adhesives, mastics, asphalt shingles, roofing materials and caulks.

Notice of Intent (NOI). A written notice of intent to demolish or renovate that is sent to a regulator for asbestos materials. For friable asbestos, EPA must be notified if 160 sq. ft or 260 linear feet of friable materials are to be removed/demolished. NYSDOL must be notified if 160 sq. ft. or 260 linear feet of non-friable materials are removed/demolished.

NYSDEC. New York State Department of Environmental Conservation

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NYSDOL. New York State Department of Labor

NYSDOL Industrial Code Rule 56. Specifies actions needed to protect the public safety and health for handling asbestos containing materials that may result in the release of asbestos fibers.

NYS DOL Industrial Code Rule 56 Certifications.

- Only persons with Supervisor, Handler, or O&M certifications are permitted to abate asbestos.
- Only certified air sampling technicians or project monitors can conduct project air monitoring.
- Only certified inspectors can collect bulk samples of ACM or suspect material.

Occupational Safety (OS). A unit of Environmental Health and Safety (EHS) responsible for employee health and safety.

OSHA. U.S. Occupational Safety & Health Administration

OSHA Asbestos Standards. In addition to NYSDOL Code Rule 56, asbestos must be handled in accordance with both the OSHA Construction Industry Standard for Asbestos (29 CFR 1926.1101) and OSHA General Industry Standard for Asbestos (29 CFR 1910.1001).

Presumed Asbestos Containing Material (PACM). Material suspected of containing asbestos of 1% or greater, for which no test results are presently available.

Project. As used in this document, construction, renovation or maintenance activities considered small or large projects, but not minor (O&M).

- Minor project: 10 ft² or less or 25 linear ft. or less.
- Small project: >10 but less than 160 ft²; >25 but less than 260 linear ft.
- Large project: 160 ft² or greater; 260 linear ft. or greater.

Project Manager. As used in this document, an employee of CPDCM, MC/RC Construction Group, Facilities, Central Utilities or Real Estate responsible for supervising or coordinating a project involving construction, renovation, demolition or maintenance. This may be, but is not limited to, a project manager, project coordinator, supervisor, working leader, etc.

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Project Monitor. A person other than the asbestos abatement contractor's supervisor who oversees the scope, timing, phasing, remediation methods, and completeness of abatement on an asbestos project.

Survey. An evaluation of a location that includes a certified lab analysis report that determine if asbestos is present.

Thermal System Insulation (TSI). Insulation material containing more than one percent (1%) asbestos applied to pipes, fittings, boilers, breeching, tanks, ducts or other structural components to prevent heat gain or loss.

Vermiculite. A grouping of naturally occurring materials often mixed with inorganic bonding agents and used in a number of products used for fireproofing or insulation. May be applied as sprayed on insulation or wallboards, or used in bulk form for insulation to fill cement block walls. Vermiculite ore, particularly extracted from the Libby Mine in Libby, Montana, may contain asbestos.

Vinyl Asbestos Tile (VAT). Vinyl tile containing asbestos

IV. RESPONSIBILITIES

Asbestos Control Group

- Maintain New York State DOL certified staff to facilitate asbestos management to ensure the University maintains compliance with the requirements of NYS DOL, OSHA and other regulatory agencies:
- Maintain annual physicals and respirator fit testing and training as required by Code Rule 56 and OSHA regulations.
- Oversee asbestos surveys of the work area to confirm they are conducted in compliance with New York State Code Rule 56 and any other applicable regulations before work is started on any project where ACM may be present.
- Provide notification of anticipated or emergency asbestos work to persons in areas adjacent to the activity
- Review results of the asbestos surveys with the CPDCM or MC/RC Construction Group Project Manager to ensure there is a clear understanding of the presence and location(s) of any ACM in the proposed work area, and an appropriate plan for managing the asbestos abatement or disturbance procedure.

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- Provide asbestos project compliance oversight and records management through project inspections and recordkeeping audits.
- Provide oversight to assure project activities involving ACM or PACM are conducted in accordance with University Policy and applicable laws and regulations.
- Review project invoices for accuracy against scope; forward invoices to construction group for payment.
- Oversee the implementation and completion of asbestos emergency procedures in the event of an emergency or incidental disturbance.
- Investigate instances of possible friable materials as well as disturbances of ACM or PACM.
- When notified of a disturbance, assure the area is cordoned off and all follow-up activities are in accord with regulations.
- Assure the use of wet methods (amended water) to clean up all disturbed ACM or PACM, or a variance is obtained where wet methods cannot be used.
- Assure required air monitoring is conducted on asbestos activities unless a negative assessment has been established for that location/activity.
- Assure the abated asbestos waste is properly disposed of in an approved landfill in compliance with EPA NESHAP regulations.
- Maintain a list of the laboratory results of bulk as well as air samples collected for all asbestos work.
- Evaluate the use of negative exposure assessments for specific tasks.
- Assist with asbestos awareness training where possible.
- Ensure appropriate project information is entered into the Asbestos Project Tracking Log
- Obtain quotes and bids from potential asbestos contractors where required

All Construction Group Project Managers (CPDCM, MC/RC In-House Construction, Real Estate Services)

- Notify the ACG of the location, the scope and any potential milestone dates of all construction activities. Drawings are to be supplied where applicable.
- After obtaining the asbestos survey reports from the ACG, review with the project team; distribute copies to the appropriate team members and contractors and determine if asbestos design is required/appropriate.
- In general, utility shutdowns are coordinated by the Project Manager. The Project Manager and ACG shall agree on who is responsible for the coordination of postings for any utility shutdowns related to the project are done.
- Approve and notify ACG of any changes in the scope of work.
- Complete the invoice table (appendix B) for all projects directly billed to the General Contractor and send it to the ACG group.

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Occupational Safety

- Assist in assessing any potential occupational health and safety hazards as necessary.
- Communicate with concerned or potentially exposed University personnel (staff, students, patients, visitors).
- Maintain asbestos management program oversight.
- Provide annual asbestos awareness training.

V. PROCEDURES

The Project Manager will consult with the ACG to define the scope of work and schedule a survey of the area to be conducted. This will include an inspection of the affected facility to determine the presence of ACM.

ACG will interface with the project manager to provide direction in the collection of samples of suspect material to be analyzed by an accredited independent laboratory. ACG will not collect samples themselves unless this presents an excessive delay in the project and the delay presents a hazard to University or other personnel.

The Project Manager is responsible to ensure the survey includes material that might be concealed or hidden in walls, ceilings or other cavities. The Project Manager will coordinate meetings with ACG to identify areas where an accidental disturbance or release might occur.

Copies of completed surveys are maintained in their project files and by the ACG. Records are available by contacting the ACG.

The Project Manager:

- Will not proceed with work involving ACM or PACM without coordinating with ACG.
- Shall identify the scope, including the boundaries of the work area and any pathways to all points of connection (utilities, etc.) outside the boundaries of the work area.
- Shall secure certification from the contractor that they reviewed the Safety Data Sheets (SDS) for all new products installed and, based on the SDS, the product(s) did not list asbestos (by itself or by any of its names) as an ingredient. Provide a copy of the certification to ACG.
- Shall provide to ACG a copy of the asbestos invoice that includes the dollar amount, types of asbestos removed, amounts of asbestos removed for all contracts written and executed by construction

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Suspected asbestos material discovered during the course of construction or renovation.

- If a previously unidentified material that is suspected to contain asbestos is discovered, all work will stop in the affected area/room, secure the area/room from other personnel and report the condition immediately to his/her supervisor. The supervisor is to notify the Project Manager.
- The Project Manager shall immediately notify the Asbestos Control Group (ACG) (x. 5-4635). Occupational Safety (x. 5-3421) shall be notified if anyone has had a potential exposure to the suspected asbestos material.
- The ACG staff person or designee shall arrange to have the suspected ACM tested by a certified lab.
- Any follow-up remedial activities shall be arranged by the ACG. In the case of a suspected exposure, all air monitoring test data shall be shared with OS, UHS and/or OEM as well as the potentially exposed individual(s).
- OS will conduct a follow up and provide the information to HR and UHS for any medical follow-up, if required.
- The ACG will enter the appropriate information into the ACG records.

Incidental Disturbance discovered during the course of any work activity.

If an incidental disturbance of asbestos or suspected asbestos containing material has occurred or if damaged asbestos or suspected asbestos containing material is identified, the following protocol must be followed:

- Immediately notify your supervisor
- Do not handle asbestos unless you are a licensed asbestos handler.
- Notify all persons in the immediate vicinity of the disturbed or damaged material to vacate the room/area. Any individuals potentially exposed or involved in the incident should stay in the vicinity of the incident for further evaluation.
- Close Off Access to the Room. Close the doors to the area and prevent entry into the area.
- The ACG will manage the Incidental Disturbance in accordance with requirements set forth in NYSDOL Code Rule 56.
- If this occurs in Strong Memorial Hospital, the Hospital Emergency and Notification Procedures are to be followed and the Administrator on Call will be contacted.

In the event of being notified of a discovery of damaged or incident disturbance of asbestos, supervisory personnel or project managers shall:

- During regular business hours, contact the ACG directly at 275-7024 or 273-4635. Let the representative of the ACG know where the ACM has been disturbed.

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- If an ACG Manager is not in the office or off site, or the above attempted notifications go to voicemail during regular business hours, call 732-9204 or 278-5900 to prevent a delayed report. Facilities Customer Service Center (x 3-4567) is to be called if unable to make contact with the others.
- Have the occupants leave the space and isolate the area.
- During evening or weekend hours, contact the Customer Service Center at 273-4567.
- In the event of a potential public safety problem, contact University Public Safety at 275-3333 or x13.
- OS shall also be contacted by calling 275-3241 should there be any risk of exposure.

Upon discovery of an incidental disturbance the Asbestos Control Group will, at a minimum:

- Respond to the site or contact a certified asbestos contractor to respond.
- Once the member of the ACG or contractor's representative arrives they will assess the likelihood that the material(s) disturbed contains asbestos.
- The ACG will arrange will arrange for the collection of samples to confirm the (asbestos) content of the materials present. ACG will not collect samples unless the delay presents a hazard to University or other personnel.
- Air sampling may be performed to determine if asbestos fibers were released (depending on the scope, location and nature of the materials disturbed and requirements for cleanup).
- ACG will visually inspect the location for ACM/PACM and make a determination of the required actions from his observations.
- If SCM disturbance is confirmed environmental air monitoring will be conducted to assess any possible exposures.
- For any location where air monitoring showed asbestos fibers were present and in excess of the OSHA Excursion Level of 1.0 fibers/cc and any employees were believed to be in the location for approximately 30 minutes or more, the following medical tests shall be offered:
 - Physical
 - Pulmonary Function Test
 - Chest x-ray

Sample collection and analysis.

Bulk samples will be collected and analyzed in compliance NYS Code Rule 56.

For projects involving asbestos abatement, air monitoring will be conducted by a NYSDOL certified asbestos sampling technician in compliance with Code Rule 56. All samples must

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be submitted to a NYSDOH ELAP approved laboratory certified for asbestos analyses. A copy of all laboratory results must be provided to the ACG.

Activities involving the penetration of a wall, ceiling, or floor require a request of the ACG to have the area assessed to prior to the work to confirm whether the building material contains asbestos or have the material sampled. Such penetration sampling will be made by NYS certified asbestos O&M certified asbestos handler.

Record Keeping and Records Management:

Records required by Federal and State regulations shall be retained and filed by ACG. These include:

- Air monitoring logs, removal documentation, and waste tracking manifests, and all other data that demonstrates compliance with applicable regulations.
- University employee exposure records and follow-up reports are maintained by UHS or OEM as appropriate. These records are to be kept for the duration of the employee's employment, plus 30 years.
- HR/Leave Administration will retain copies of any incident report filed by the employee for potential asbestos exposures. The incident report and the follow up will be retained by HR/Leave Administration for the duration of the employee's employment, plus 30 years.

Training

Any person performing regulated asbestos work must have a valid NYSDOL certificate appropriate for the level of work. A copy must be kept on file by his/her department.

Staff that may encounter asbestos during the course of their normal work routine (such as those from Construction Planning, Design & Project Planning, Information Technology, Real Estate, maintenance and Environmental Services) must receive annual asbestos awareness training. The employees' department is responsible for maintaining the records of those attending training or ensuring they are entered into HRMS.

VI. REFERENCES

- NYS DOL Asbestos Regulations (12 NYCRR Part 56)
- NYS DOL Asbestos Regulations Guidance Document (Supplement to Part 56)
- OSHA 29CFR 1910.1001 Asbestos in General Industry
- OSHA 29CFR 1926.1101 Asbestos in the Construction Industry
- EPA Learn About Asbestos: <http://www2.epa.gov/asbestos>

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- EPA What is an Operation and Maintenance Program
<http://www2.epa.gov/asbestos/what-operations-and-maintenance-om-program>
- EPA Current Best Practices for Preventing Asbestos Exposure Among Brake and Clutch Repair Workers <http://www2.epa.gov/asbestos/current-best-practices-preventing-asbestos-exposure-among-brake-and-clutch-repair-workers-1>

VII. APPENDICES/FORMS

Appendix A: Asbestos Responsibility Table
Appendix B: Project Invoice Review Table

VIII. REVISION HISTORY

Date	Revision No.	Description

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**Appendix A:
Asbestos Responsibility Table**

Asbestos Process	Contracted Construction	In-House Construction	O&M	IT
History	ACG	ACG	ACG	ACG
Survey/Scoping	ACG with CPDCM	ACG with Facilities	Facilities	Facilities
Walkthrough w contractor	ACG with CPDCM	ACG with Facilities	Facilities	Facilities
Direct/ coordinate Sampling	ACG with CPDCM	ACG	Facilities	ACG
Bid/Request	ACG & Campus Planning Design & Construction Management	ACG	N/A	N/A
Collect Samples	3rd Party	3rd Party	3rd Party	3rd Party
Abate	3rd Party	3rd Party	3rd Party	3rd Party
Review invoices/confirm-approve invoices	ACG	ACG	Facilities	Facilities
Forward project invoice for payment to requester	ACG	ACG	Facilities	Facilities
Process FAMIS	N/A	ACG	Facilities	Facilities
Pay bills; follow-up on delinquent payments	Campus Planning Design & Construction Management	Facilities	Facilities	Facilities
Audit/Confirm Compliance	ACG/3rd Party Project Monitor	ACG/3rd Party Project Monitor	ACG	ACG
Update database	ACG	ACG	ACG	ACG

