



MONTGOMERY COLLEGE
STANDARD OPERATING
PROCEDURES

Last Modified:

Last Reviewed:

Approved: Chevelle Glymph

Subject Ceiling Tile Removal

Subject: Ceiling Tile Removal

INTENDED AUDIENCE: Facilities ARA, Operations and Maintenance

PURPOSE: To provide guidance to Montgomery College Facilities and ARA group in the removal of drop ceiling tiles.

POLICY

A. Respiratory protection using National Institute for Occupational Safety and Health (NIOSH) approved respirators is only required for employees whose job exposes them to contaminants in excess of the OSHA PEL, or when symptoms have been observed that are indicative of overexposure. OSHA Respiratory Protection Standard 29 CFR 134.

1. In any workplace where respirators are necessary to protect the health of the employee or whenever respirators are required by the employer, the employer shall establish and implement a written respiratory protection program with worksite-specific procedures. The program shall be updated as necessary to reflect those changes in workplace conditions that affect respirator use. OSHA Respiratory Protection Program 29 CFR 1910.134 (c)(1)

B. The determination of whether respirator is required is made by the Public Health & Environmental Safety Office along with the employee's supervisor.

1. A Job Hazard Analysis is performed, which may include personal air monitoring.

C. The OSHA respiratory protection standard requires respirators when engineering controls or other means of preventing atmospheric contamination are not feasible, or until they are implemented. Suspended ceiling demolition appears to generate a lot of airborne dust. Therefore, employees will wear tight fitting negative pressure respirator or a powered air purifying respirator with an appropriate filter until controls can prevent exposure or hazard analysis shows controls are not necessary.

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1. In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective shall be to prevent atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used pursuant to this section. OSHA Respiratory Protection Program 29 CFR 1910.134 (a)(1)

RESPONSIBILITIES

Public Health & Environmental Safety Office (PHES)

- Assist work units in writing and revising SOP
- Implement and follow MC Respiratory Protection SOP.
- Arrange for medical evaluation for respirator use. (*see MC Respirator SOP for medical assessment procedures*)
- Perform a job pre-inspection if ACM is present in the work area.

Facilities Department

- Department supervisor is responsible for implementing and following the Respiratory Protection program for his/her department (*see MC RESPIRATOR PROTECTION SOP for full list of responsibilities*)
- Notify PHES when ceiling tile removal/demolition is scheduled
- Review Asbestos Survey Map before starting work in area, inform units working in area of any ACM present.

Employees






- Follow work practices described in this SOP, including the use of appropriate protection equipment.
- Follow MC Respirator Protection SOP when using required respirator

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- Attend all training required

REQUIRED PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment (PPE)

 Safety glasses must be worn at all times in work areas.	 Disposable coveralls
 Appropriate footwear must be worn. Shoe must be fully enclosed.	 NIOSH approved Half-face respirator with HEPA filter required or Powered Air-Purifying Respirator (PAPR).
 Work gloves required.	

REQUIRED TRAINING

Training List

**Asbestos OSHA Class III (16 Hours Operations and Maintenance)
Back Protection
Ladder Safety
Lead Awareness
Respiratory Protection Training

****Asbestos OSHA Class III training is required for educational purposes only, no MC employees are expected to undertake any work that is Class III asbestos work.**

PROCEDURE

1. Schedule the work after normal working hours (nights or weekends), if possible. Close work area to staff & students. Relocate all non-essential equipment from the area, e.g. desks, papers, chairs, etc.

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2. Don the half mask respirator with HEPA filters and perform a user seal check. Don disposable coveralls.
3. Don all personal protective equipment prior to starting work. E.g. safety glasses, gloves etc.
4. Inspect step ladder and erect it below the work area.
5. Push ceiling tile up as gently as possible. Raise it far enough above the neighboring tiles so that the tile can be moved to rest on the tiles next to it.
6. If ceiling tiles are to be replaced, immediately lower the tile to the ground, in a manner which will not break the material to minimize dust and respiratory particulate release.

In occupied buildings the following dust control methods must be implemented to minimize migration of construction dust to adjacent occupied areas:

- a) Separate work area from adjacent areas with impermeable barriers, such as polyethylene sheeting.
- b) Seal and shut down (if possible) HVAC systems within the work area.
- c) Install HEPA air filtration devices inside the work area that is exhausted outside of the space (preferably outdoors), thus establishing a negative pressure within the work area with respect to surrounding areas.
- d) Install zippered doorways or airlocks at entrances/exits to the work area.
- e) Place “sticky mats” at entrances/exits to the work area to help minimize tracking of dust to non-construction areas.

EMERGENCY PROCEDURES

A fiber release episode is an uncontrolled or unintentional disturbance of asbestos-containing materials resulting in visible emission or debris. The likelihood of an emission depends on the friability of the material as well as the physical condition. Anticipate and plan for unexpected fiber release episodes to minimize the impact of any release through prompt corrective action.

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Suspected Asbestos Exposure:

Exposure to asbestos fibers does not have any immediate health effect. After it is confirmed that asbestos material was impacted and you suspect that you were potentially exposed to airborne asbestos fibers, document the exposure:

1. Restrict access into the area, close off area immediately to all employees and students.
2. Do not attempt to clean up damaged material
3. Report the exposure to your immediate supervisor.
4. Call Public Safety and fill out an accident/incident report. Public Safety will notify the HRSTM Risk Management Coordinator who administers the Workers Compensation Program.
5. Contact Public Health & Environmental Safety (240) 753-2526 or (240) 495-2827. Provide as much information on the location of material and type of material (*see Appendix A: Record of Response to Asbestos Fiber Release*)

PHES responsibilities:

- Upon arrival, assess the condition of the material
- Send out notification of suspected asbestos exposure to Facilities and Public Safety.
- Collect samples for analysis to confirm the contents of the material.
- Engage with asbestos consultant(s) and abatement contractor(s) as necessary.
- Provide a post-review summary of findings to affected departments.

Facilities responsibilities:

- Inform building occupants and affected departments of suspected asbestos exposure

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- Restrict access to affected area
- If contractors working in affected area, communicate notice to contractors.

Minor Fiber Release Episodes

A minor fiber release episode means any uncontrolled or unintentional disturbance of less than three linear feet or three square feet of ACM resulting in visible dust emission. (For example, a broken asbestos-containing ceiling tile, or damaged pipe joint insulation.)

- Evacuate and restrict access to the area.
- Report the incident to the supervisor, Campus O&M and the Public Health & Environmental Safety Office.

A qualified worker may clean up a minor fiber release:

- a. Put on disposable gloves.
- b. Saturate the debris with emended water using a mister with a very fine spray.
- c. Place the debris 6-mil asbestos disposal bag labeled:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST
- d. Use a HEPA vacuum to clean up small debris.
- e. Using disposable materials, wipe the area with dampened mops, sponges and/or cloths, **never dry sweep, dry mop, or dry dust.** Place mops, sponges and wipes into the disposal bag.
- f. Seal the bag, date it, and remove the bag to designated hazardous waste storage on the Campus.
- g. After the clean-up is complete, qualified O&M asbestos workers may repair, remove or encapsulate damaged ACM with asbestos-free building materials.

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Major Fiber Release Episode

A major fiber release episode means the falling or dislodging of more than 3 square feet or 3 linear feet of friable ACM.

- a. Report the incident to the supervisor, Campus O&M and the Public Health & Environmental Safety Office.
- b. Restrict entry into the area and post signs to prevent entry into the area by persons other than those necessary to perform the response action.
- c. Shut off or temporarily modify the air-handling system to prevent the distribution of fibers to other areas in the building.
- d. Only accredited persons may design and conduct response action for any major fiber release.

DEFINITIONS

Half-Face Respirator: It is a tight-fitting, air-purifying respirator with replaceable filters (for particulates) or cartridges or canisters (for gases and vapors). In either case, these are attached to a rubber or silicone facepiece that covers the nose and mouth. This type of respirator can be used instead of a filtering facepiece respirator. Employee using this needs to be fit tested every year. A medical evaluation is also required before wearing this respirator.

High-Efficiency Particulate Air (HEPA) Filter: A filter capable of trapping and retaining at least 99.97% of monodispersed particles of 0.3 micrometers or larger in diameter.

OSHA Permissible Exposure Limit (PEL): regulatory limits set by OSHA on the amount or concentration of a substance in the air an employee can be exposed to.

Powered Air-Purifying Respirators (PAPR): type of respirator that is battery operated, consists of a half or full facepiece, breathing tube, battery-operated blower, and particulate filters (HEPA only).



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Appendix A: Record of Response to Asbestos Fiber Release

Environmental Health and Safety
Montgomery College

Form: RESPONSE TO ASBESTOS FIBER RELEASE

- A **minor fiber release episode** means any uncontrolled or unintentional disturbance of less than three linear feet or three square feet of ACM resulting in visible dust emission. (For example, a broken asbestos-containing ceiling tile, or damaged pipe joint insulation.)
- A **major fiber release episode** means the falling or dislodging of more than 3 square feet or 3 linear feet of friable ACM.

The emergency contact person is

Name	Position/Title	Phone #
Michael Rocke	Environmental Safety Specialist	Work: 240-567-4266 Mobile: 240-753-2526

The back up contact person is

Name	Position/Title	Phone #
Mai Toyofuku	Interim Environmental Safety Manager	Work: 240-567-4290 Mobile: 240-495-2827

How to contact qualified/accredited workers and supervisors:

BARCO Enterprises
Brett Harrison, Project Planner
11200 Pulaski Hwy. PO Box 0074
White Marsh, MD 21162

800-832-7538



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For a **major fiber release episode**, contact a project designer/industrial hygienist to complete the response action:

Tidewater, Inc.

Skanda Abeyesekere, Project Manager / Certified Industrial Hygienist

6625 Selnick Drive, Suite A

Elkridge, MD 21075

410-540-8700

Date _____ Campus _____ Building _____ Room(s) _____

Type of ACM that was disturbed (friable, non-friable, floor tile, pipe insulation, etc.)

Potential cause of the disturbance (water damage, accidental contact, deterioration, etc.)

Actions taken to prevent spread of fibers (cover/seal air ducts, shut off HVAC, etc.)



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Name(s) of College employees or contractor cleaning the area

Date the cleanup was completed _____

Number of bags used to collect the debris and other asbestos waste _____

Names and contact information of persons concerned about possible exposure to asbestos fibers
(Note: OSHA defines employee exposure as the exposure to airborne asbestos that would occur if
the employee were not using respiratory protection.)

Number of additional pages _____