



# Standard Operating Procedures for Dust Mitigation

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**Purpose:** The New York City Department of Education (NYC DOE) implements these standard operating procedures for dust mitigation (Procedures) to better ensure a healthy and safe environment for students, school staff, and the public when maintenance, repair, and/or renovation activity takes place. All such activities that generate dust and/or debris must be performed in such a way as to mitigate the impact of the dust and/or debris on the health and safety of the building’s occupants.

**Applicability:** The Procedures must be utilized by anyone performing work on maintenance, repair, and/or renovation projects that could result in the generation of dust and/or debris, including but not limited to custodial staff, skilled trades, and contractors (Personnel). The Procedures apply to work performed in any DOE building and/or DOE leased site (DOE Facilities), and any building in which the DOE is responsible for the maintenance or repair. The Procedures specify requirements for preparation of the work area, work practices, and cleanup efforts in order to mitigate impact of dust/debris.

**Exclusions:** **Asbestos Containing Building Materials (ACBM)**

The Procedures are **NOT** applicable to maintenance work that directly or indirectly disturbs any confirmed and/or presumed asbestos containing building materials (ACBM). Only licensed asbestos contractors using asbestos-certified workers shall perform work on confirmed or presumed ACBM, and must follow proper asbestos abatement procedures in accordance with all applicable Federal, NYS, NYC asbestos rules and regulations and NYC DOE policies and procedures.<sup>1</sup>

**Lead-Based Paint**

The Procedures are **NOT** applicable to maintenance work that directly or indirectly disturbs surfaces and/or components that are known, assumed, or suspected of being coated with Lead-Based Paint (LBP). All work that includes confirmed or presumed LBP must be performed in accordance with “Standard Operating Procedures for Lead-based Paint Remediation,” as well as all applicable Federal, NYS, NYC rules and regulations and NYC DOE policies and procedures.

**General:** Prior to the commencement of work, Personnel must confirm that the work to be performed will not disturb any ACBM.

All Personnel disturbing painted surfaces in areas other than the excluded classrooms/areas (see above exclusions) must comply with OSHA Lead Standard 29 CFR 1926.62 and Hazard Communication requirements as well as the NYC

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<sup>1</sup> See the *APPLICABLE STANDARDS AND REGULATIONS* section in the appendix for a list of Federal, NYS, and NYC regulations and industry standards applicable to asbestos projects.

DOE “Standard Operating Procedures for Lead-based Paint Remediation” when performing work at DOE facilities.

All projects must establish work areas based upon project classification. The School Administration directs the schedule of all work, in order to mitigate potential impact of dust/debris and for minimal disruption of the learning environment. Access to all active work areas must be restricted to non-authorized Personnel.

All work must be performed in accordance with all applicable Federal, NYS, NYC rules and regulations and NYC DOE policies and procedures.

**Roles of Project Supervisors:**

A Project Supervisor(s) must ensure compliance with the Procedures for all maintenance, repair, and/or renovation projects. The following list identifies the duties of the Project Supervisor when implementing activities under the Procedures:

- Familiarity with and understanding of the Procedures and how the Procedures apply to Personnel and project.
- Ensure day-to-day compliance with the Procedures.
- Assess the potential dust generating activities and properly classify the job based on the quantity of material being disturbed and the work method used.
- Periodically inspect work sites and ensure that the Procedures are being followed.
- Prior to commencement of work, complete and submit the Pre-Work Dust Mitigation Procedures Checklist.
- Upon conclusion of work, complete and submit the Post-Work Dust Mitigation Procedures Checklist.

**Training Requirements:**

Supervisor training will inform key individuals of the following:

- The requirements for completing work under the Procedures.
- The need to understand how the Procedures and dust mitigation efforts apply to their specific job sites and employees.
- The importance of compliance with the Procedures.
- Incident reporting and notification of the NYC DOE’s Office of Environmental Health and Safety (EHS) within the Division of School Facilities (DSF).

Applicable Personnel must be trained in the requirements of the Procedures. The training must be provided in accordance with the Procedures as well as the scope and specific requirements of the current job site.

**Project**

**Classification:**

All projects must be classified as one of the following two categories on the Pre-work Dust Mitigation Checklist and must be performed in accordance with the corresponding work plan:

Large Scale Jobs: Activities that may generate dust and disturb material with an area of 2 sq. feet or greater.

Minor Scale Jobs: Activities that may generate dust and disturb material with an area of less than 2 sq. feet.

**Products:**

**Polyethylene Sheeting:** Polyethylene sheeting must be 6-mil in thickness. The sheeting must be appropriately sized to minimize the frequency of joints and seams as determined by Personnel.

**Polyethylene Disposal Bags:** Polyethylene disposal bags must be 6-mil in thickness. Prior to vacating the work area, Personnel must seal all bags containing waste with duct tape or plastic ties designed for secure closure.

**Tape and/or Adhesive Spray:** All tape and/or adhesive spray must be capable of sealing joints and seams of adjacent polyethylene sheets. All tape and/or adhesive spray must also be capable of attaching polyethylene sheets to finished and unfinished surfaces. All tape and/or adhesive spray must also be effective under both wet and dry conditions.

**HEPA-Filtered Exhaust Systems:** All powered equipment must be equipped and utilized in conjunction with a HEPA-filtered exhaust system. NYC DOE prohibits the use of powered equipment without a HEPA-filtered exhaust system unless there is prior written approval from EHS.

**Vacuum Units:** Vacuum units must be used for all projects and be equipped with HEPA filtration capable of trapping and retaining 99.97% of all particles 0.3 micrometers in diameter or greater.

**Warning Signs and/or Barrier Tape:** Warning signs and/or barrier tape must be posted at each work area to restrict access to the area by unauthorized personnel. Signage must read: "Do Not Enter – Construction Area."

**Other Required Cleaning Materials and Equipment:**

- Disposable rags
- String mop and buckets
- Cleaning solution Ledizolv or equivalent – Tri-sodium

- phosphate (TSP) is prohibited.
- Water mister or spray bottles
- Dustpan and soft broom (dry sweeping prohibited)
- Hand and eye protection (chemical resistant gloves and goggles)
- Ground Fault Circuit Interrupter (GFCI) – All electrical equipment must utilize GFCI to avoid shock.

**General  
Work Area  
Preparation:**

All occupants of the immediate work area must vacate until completion of the work. Project areas must include the perimeter to ensure mitigation of dust exposure to occupants of the building who are outside of the work area.

All doors at entrances to the work area must be closed and/or sealed with polyethylene sheeting as described in the Procedures. If doorways cannot be closed and sealed with tape, Personnel must seal a single layer of polyethylene sheeting over the opening with a flap weighed at the bottom to close the opening. Personnel must install barrier dust mats at all entrances and exits. Warning signs and barrier tape must be posted to restrict access to the work area.

Personnel must move all furniture, fixtures, equipment, and personal effects a minimum of five (5) feet from the work area and cover aforementioned items with polyethylene sheeting. Personnel must secure this polyethylene sheeting with duct tape at the edges. Personnel must cover all immovable objects with polyethylene sheeting and seal the polyethylene sheeting with tape.

Personnel must place polyethylene sheeting under and adjacent to the surface or component being disturbed to mitigate the spread of dust and debris. Drop cloths must be of sufficient size to exceed the impact areas by a minimum of five (5) feet in every direction, or as necessary to protect furniture, fixtures, equipment, or personal effects in or near the work area.

**Dust Control  
Procedures:**

Wet methods must be used to mitigate the spread of dust and debris. These wet methods require misting or spray bottles to be used to wet surfaces, reduce dust, and wet debris. Water or detergents must not be sprayed or applied at or near electrical sockets, switches, or outlets.

Power tools that generate dust must have a HEPA filtration system or must be performed in a completely self-contained environment.

Personnel must carry or transport all dust, debris, waste, and removed components from the work area to the disposal site in a manner that mitigates the spread of dust or debris. All waste or debris must be placed in polyethylene disposal bags as described in the Procedures, or containers to mitigate the spread of dust during transport. Large components or materials must be wrapped in polyethylene sheeting or cleaned and vacuumed using HEPA

filtration prior to transport from the work area.

**Cleanup  
Procedures:**

All dust, debris, and waste associated with or generated by the maintenance activity must be removed prior to project completion. Final cleanup shall ensure mitigation of dust's impact on occupants.

Personnel must vacuum the entire work area using a HEPA-filtered vacuum, then Personnel must wet wipe and /or mop the work area. Once Personnel have completed wet wiping and/or mopping, they must vacuum the entire work area again using a HEPA-filtered vacuum. All surfaces in and around the work area must be free of visible dust.

Cleanup must begin at the far end of the work area and move towards the entrance vacuuming floors last.

If dust or debris has migrated to areas of the building other than the immediate work area, those areas must be thoroughly cleaned to ensure all visible dust generated by the activity is eliminated.

## **WORK PRACTICES FOR LARGE SCALE JOBS (IMPACTING 2 SQ. FEET OR GREATER OF MATERIAL)**

1. Determine the most effective way of isolating the work area from occupants. This may be done using:
  - a. a temporary demising wall (from floor to ceiling) perform work after hours and isolate the area from the rest of the building, following established procedures; or
  - b. plastic barriers; or
  - c. by sealing off the doors by taping the door closed; or
  - d. temporarily removing the door and placing polyethylene sheeting over the doorway, cutting a slit down the middle, and covering the slit with a second layer of polyethylene sheeting to act as a flap.
2. Post warning signs and/or barrier tape at each work area to restrict access to the area by unauthorized personnel. Do not let occupants of other unauthorized employees in the area.
3. Cover all air return or exhaust vents in the work area with polyethylene sheeting and duct tape.
4. Remove all objects from the room or work area to a storage area. Prior to removal, wet-wipe any excessively dirty items with a rag misted with water. Cover large items or immovable objects remaining in the work area with polyethylene sheeting. Seal the rags in a polyethylene bag for disposal.
5. Cover the floor with a polyethylene sheeting immediately underneath the work area.
  - a. Temporarily tape polyethylene sheeting to the floor using duct tape.
6. While performing the work, limit the dust generated by removing the materials in sections, utilizing HEPA filtration or HEPA vacuum collection systems. Place debris in polyethylene bags immediately for disposal.
7. Lightly mist with water from a spray bottle, e.g., Hudson-type pump sprayer, to control dust.
8. Use ground-fault circuit interrupter (GFCIs) devices in all extension cords and electrical equipment.
9. If the work produces dust that cannot be limited by removal in sections or misting, and the work area configuration allows, utilize the HEPA air filtration machine with the intake directly across from the dust generating activity. Exhaust the HEPA unit outside of the building.
10. Occasionally mist and wet-wipe the polyethylene sheeting and place rags in polyethylene bags for disposal.
11. As construction debris is generated, HEPA vacuum the debris, and seal in polyethylene bags or polyethylene sheeting any remaining debris for transport.

12. When the construction task is completed, vacuum and wet-wipe the polyethylene sheeting.
13. Place rags on the polyethylene sheeting and tightly roll from the corners to the middle. Seal the rolled polyethylene sheeting and wet rags with duct tape.
14. Visually inspect the area for any remaining dust or debris. HEPA vacuum, wet wipe and vacuum a second time to remove all visible dust and debris.
15. Remove the polyethylene sheeting from all air returns and exhausts. Wet-wipe, roll it up for disposal.
16. Transport debris to the disposal area using the following guidelines:
  - a. Always try to transport debris during the hours of least activity in the building and along the most direct, but least congested route.
  - b. If using a disposal cart or container, ensure the lid is tightly secured and the wheels are clean prior to exiting the work area.
  - c. If any debris is spilled outside of the work area, immediately wet-wipe the debris and seal in a bag.
17. Clean all tools and equipment so that no dust nor debris is present before removal of tools and equipment from the work area.
18. Prior to removing any temporary wall partition from floor to ceiling or polyethylene barriers, a final inspection must be performed by the Project Supervisor to ensure proper cleanup has been completed.



## **WORK PRACTICES FOR MINOR SCALE JOBS (IMPACTING LESS THAN 2 SQ. FEET OF MATERIAL)**

1. Remove all furniture, fixtures, and belongings from the work area a minimum of five (5) feet in all directions.
2. Restrict access to the immediate work area:
  - a. Post warning signs and/or barrier tape at each work area to restrict access to the area by unauthorized personnel.
  - b. Keep all doors closed and do not allow unauthorized personnel in the area.
  - c. In common areas, utilize barrier tape to establish the restricted work area.
3. Place polyethylene sheeting immediately underneath the work area extending a minimum of five (5) feet in each direction. For work on ceilings, cover the floor immediately under the work area with polyethylene sheeting of sufficient size to catch the dust and debris generated by the activity.
4. Secure the polyethylene sheeting to the floor with duct tape.
5. Cover all air return or exhaust vents with polyethylene sheeting and secure with duct tape if within five (5) feet of the work area.
6. Minimize dust production during the work by lightly misting work area with water from a spray bottle, e.g., Hudson-type pump sprayer, to control dust.
7. When the work is completed, wet-wipe the polyethylene sheeting and, if necessary, other areas close by with a damp rag.
8. Place rags on the polyethylene sheeting and tightly roll from the corners to the middle. Seal the rolled polyethylene sheeting and wet rags with duct tape and place in polyethylene bags.
9. Visually inspect the area for any remaining dust and wet-wipe, as necessary.
10. If installed, remove the polyethylene sheeting from all air returns and exhausts. Roll-up for disposal.
12. Transport debris to the outside disposal area using the following guidelines:
  - a. Always try to transport debris during the hours of least activity in the building and along the most direct, but least congested route.
  - b. If using a disposal cart or container, ensure the lid is tightly secured and the wheels are free of dust and debris prior to exiting the work area.
  - c. If any debris is spilled outside of the work area, immediately wet-wipe the debris and seal in a bag.
13. Clean all tools and equipment so that no dust nor debris is present before removal of tools and equipment from the work area.

## APPENDIX

### RELEVANT STANDARDS AND REGULATIONS

All personnel must comply with all applicable standards, rules and regulations including, but not limited to, the following promulgated by the agencies and organizations listed below, as well as all Federal, State and Local laws:

Below are relevant Federal, NYS, and NYC regulations and industry standards applicable to **Asbestos projects**:

A. Federal Regulations:

1. 29 CFR 1910.1001, "Asbestos" (OSHA)
2. 29 CFR 1910.1200, "Hazard Communication" (OSHA)
3. 29 CFR 1910.134, "Respiratory Protection" (OSHA)
4. 29 CFR 1910.145, "Specification for Accident Prevention Signs and Tags" (OSHA)
5. 29 CFR 1926, "Construction Industry" (OSHA)
6. 29 CFR 1926.1101, "Asbestos, Tremolite, Anthophyllite, and Actinolite" (OSHA)
7. 29 CFR 1926.500 "Guardrails, Handrails and Covers" (OSHA)
8. 40 CFR 61, Subpart A, "General Provisions" (EPA)
9. 40 CFR 61, Subpart M, "National Emission Standard for Asbestos" (EPA)
10. 49 CFR 171-172, Transportation Standards (DOT)

B. New York State Regulations:

1. 12 NYCRR, Part 56, "Asbestos", Industrial Code Rule 56 (DOL)
2. 6 NYCRR, Parts 360, 364, Disposal and Transportation (DEC)
3. 10 NYCRR, Part 73, "Asbestos Safety Program Requirements" (DOH)
4. "New York State Uniform Fire Prevention and Building Code"

C. New York City Regulations:

1. Title 15, Chapter 1 of the Rules of the City of New York

D. Standards and Guidance Documents:

1. American National Standard Institute (ANSI) Z88.2-80, Practices for Respiratory Protection
2. ANSI Z9.2-79, Fundamentals Governing the Design and Operation of Local Exhaust Systems
3. EPA 560/585-024, Guidance for Controlling Asbestos Containing Materials in Buildings (Purple Book)
4. EPA 530-SW-85-007, Asbestos Waste Management Guidance
5. ASTM Standard E1368 "Standard Practice for Visual Inspection of Asbestos Abatement Projects"

Below are relevant Federal, NYS, and NYC regulations and industry standards applicable to **Lead Based Paint projects**:

A. Federal Regulations:

1. 40 CFR 745. Lead-Based Paint Poisoning Prevention in Certain Residential Structures

B. New York City Regulations:

1. Local Law 1 of 2004 - The New York City Childhood Lead Poisoning Prevention Act of 2003.
2. New York City Administrative Code – Title 17, Chapter 9 – Lead.
3. New York City Administrative Code – Definition of Lead Based Paint – Title 27, Subchapter 2, Article 14, 27-2056.2.
4. Local Law 71 of 2019.
5. Local Law 64 of 2019.
6. NYC Health Code §43 School Based Programs for Children Ages Three Through Five.
7. NYC Health Code §47 Child Care Programs and Family Shelter-Based Drop-Off Child Supervision Programs.
8. Health Code §173.14 Safety Standards for Lead-Based Paint Abatement and Remediation, and Work That Disturbs Lead-Based Paint.