

SECTION 028304

HANDLING OF LEAD CONTAINING MATERIALS

PART 1 GENERAL

1.01 SUMMARY

- A. This Section specifies the requirements for the detection and prevention of lead dust, paint chips, or debris contamination of lead dust control work areas and areas adjacent to them, protection of workers, post-work cleaning, predisposal testing and appropriate disposal of removed material.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Existing Hazardous Material Information: Document 003126.
- B. Summary of the Work: Section 011000.
- C. Construction Facilities and Temporary Controls: Section 015000.
- D. Removals Cutting and Patching: Section 017329.

1.03 REFERENCES

- A. New York State Department of Environmental Conservation (DEC) 6NYCRR:
 - 1. Part 360 Solid Waste Management Facilities.
 - 2. Part 364 Waste Transporter Permits.
 - 3. Part 370 Hazardous Waste Management System-General.
 - 4. Part 371 Identification and Listing of Hazardous Wastes.
 - 5. Part 372 Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities.
 - 6. Part 373 Hazardous Waste Management Facilities.
- B. New York State Department of Transportation (DOT): Follow all regulations of 49CFR Part 100 through 199.
- C. Occupational Safety and Health Administration (OSHA): Lead Exposure in Construction: Interim Final Rule 29 CFR 1926.62.
- D. U.S. Department of Housing and Urban Development (HUD): Guidelines for evaluation and control of Lead based paint hazards: Title Ten of Housing and Community Act of 1992.
- E. U.S. Environmental Protection Agency (EPA): Resource Conservation and Recovery Act (RCRA) Section 3004 Hazardous and Solid Waste Amendments.
- F. U.S. Environmental Protection Agency (EPA): Toxicity Characteristics Leaching Procedure EPA Method 1311.

1.04 DEFINITIONS

- A. Authorized Personnel: Facility or the Director's Representative, and all other personnel who are authorized officials of any regulating agency, be it State, Local, Federal or Private entity who possess legal authority for enforcement or inspection of the work.
- B. Containment: The enclosure within the building which establishes a contaminated area and surrounds the location where lead remediation is taking place and establishes a Lead Control Work Area.
- C. Floor Surface Clearance Criteria: Shall be determined and established by an independent testing lab hired by the Director's Representative, conforming to all standards set forth by all authorities having jurisdiction, mentioned in the references, and issue the certification of cleaning. At a minimum no single post work lead wipe sample test values shall have reading levels greater than the levels established by pre-work wipe sampling test values, or greater than 40 mg/ft². Record levels in mg/ft².
- D. Fixed Object: Mechanical equipment, electrical equipment, fire detection systems, alarms, and all other fixed equipment, furniture, fixtures or other items which cannot be removed from the work area.
- E. HEPA: High Efficiency Particulate Absolute filtration efficiency of 99.97 percent down to 0.3 microns. Filtration provided on specialized vacuums and air filtration devices to trap particles.
- F. Lead Based Paint (LBP): Paints or other surface coatings that contain lead equal to or greater than 1.0 milligrams per square centimeter or 0.5 percent of lead by weight.
- G. Lead Dust Control Work Area: A cordoned off area with drop clothes or an enclosed area or structure with containment to prevent the spread of lead dust, paint chips, or debris from lead-containing paint disturbance operations.
- H. PPE: Personal Protective Equipment.

1.05 ABBREVIATIONS

- A. ASTM: American Society for Testing and Materials
1916 Race Street
Philadelphia, PA 19103
- B. CFR: Code of Federal Regulations
Government Printing Office
Washington, DC 20402
- C. DOT: Department of Transportation
Main Office, 50 Wolf Road
Albany, NY 12232

- D. NIOSH: National Institute for Occupational Safety and Health
Building J, N.E. Room 3007
Atlanta, Georgia 30333
- E. OSHA: Occupational Safety and Health Administration
200 Constitution Avenue
Washington, DC 20210
- F. USEPA: United States Environmental Protection Agency
401 M Street SW
Washington, DC 20460

1.06 SUBMITTALS

- A. Quality Control Submittals: Submit the entire Lead Abatement submittal package at the same time.
 - 1. Worker' Qualifications: The persons removing lead containing/coated material and their Supervisors shall be personally experienced in this type of work and shall have been employed by a company with a minimum of one year experience in this type of work. Submit a copy of documentation of completion of the EPA lead renovators training program.
 - a. Name of lead supervisor on site during the work.
 - 2. Detailed Work Plan: Submit one copy of the work plan required under Quality Assurance Article.
 - 3. Waste Transporter Permit: One copy of transporter's current NYS DEC waste transporter permit.
- B. Operation and Maintenance Data: Submit air filtration unit operation and maintenance data and manufacturer's catalog sheets for the HEPA filter.
 - 1. Provide an affidavit stating that the HEPA filters to be used for this project are new and unused.
- C. Contract Closeout Submittals:
 - 1. Assessment Report compiled by a testing lab certifying that the work area has lead concentrations below the levels specified under the cleaning criteria.
 - 2. Disposal Site Receipts: Copy of waste shipment record and disposal site receipt showing that the lead-containing materials have been properly disposed.

1.07 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with the referenced standards.
- B. Pre-Work Conference: Before the Work of this Section is scheduled to commence, a conference will be held by the Director's Representative at the Site with the contractor and the lead handling subcontractor (if any) for the purpose of reviewing the Contract Documents, discussing requirements for the Work, and reviewing the Work procedures.

- C. Detailed Lead-Containing Material Removal Work Plan: Before the physical Work begins, prepare a detailed lead-containing material removal work plan.
 - 1. The work plan shall include, but not be limited to, the location, size, and details of lead dust control work areas, containment, sequencing of lead containing material handling, work procedures, types of equipment, crew size, and emergency procedures for fire and medical emergencies.

1.08 PROJECT CONDITIONS

- A. Shut-down of Air Handling System: Complete the Work of this Section within the time limitation allowed for shutdown of the air handling system serving the work area.
 - 1. The air handling system will not be restarted until approval of the post-work dust-wipe testing following the last cleaning.
- B. Cover and seal all fin-tube radiator covers, diffusers, duplex outlets, speakers, smoke and heat detectors, etc. Use temporary plasticized partitions as required.
 - 1. Prevent lead containing dust from entering hard to clean areas within the dust containment area.
 - 2. Items judged to be too difficult to protect may be disconnected, removed and replaced at contractor's option.
- C. Remove or encase all movable equipment in the work area with two layers of six mil fire retardant polyethylene sheeting.
- D. Cut and alter existing materials as required to perform the work. Limit cutting to the smallest amount necessary. Core drill round holes and saw cut other openings where possible for removal work. Flame cutting, high speed grinding or welding is prohibited on lead painted surfaces.

1.09 HEALTH AND SAFETY

- A. Where in the performance of the work, workers, supervisory personnel or sub-contractors may encounter, disturb, or otherwise function in the immediate vicinity of contaminated items and materials, all personnel shall take appropriate continuous measures as necessary to protect all ancillary building occupants from the potential lead exposure.
 - 1. Such measures shall include the procedures and methods described herein and shall be in compliance with all applicable regulations of Federal, State and Local agencies.

1.10 FIRE PROTECTION, EMERGENCY EGRESS AND SECURITY

- A. Establish emergency and fire exits from the lead dust control work area containment. Provide first aid kits and two full sets of protective clothing and respirators for use by qualified emergency personnel outside of the work area.
- B. Provide a logbook throughout the entire term of the project. All persons who enter the regulated lead dust control work area or containment shall sign the logbook. Document any intrusion or incident in the log book.

1.11 PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

- A. Workers must wear protective suits, protective gloves, eye protection and a minimum of half-face respirator with new HEPA filter cartridge for all projects. Respiratory protection shall be in accordance with OSHA regulation 1910.134 and ANSI Z88.2.
- B. Workers must be trained per EPA, have medical clearance and must have recently received pulmonary function test (PFT) and respirator fit tested by a trained professional.
 - 1. A personal air sampling program shall be in place as required by OSHA.
 - 2. The use of respirators must also follow a complete respiratory protection program as specified by OSHA.

PART 2 PRODUCTS

2.01 RESPIRATORS

- A. Type: Approved by the Mine Safety and Health Administration (MSHA), Department of Labor, or the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services.

2.02 VACUUM CLEANERS

- A. Type: Vacuums equipped with new HEPA filters.

2.03 PLASTIC SHEETS

- A. Type: Minimum 6 mil., clear, fire retardant polyethylene sheets.
- B. Floor Protective Layer: Minimum 10 mil., reinforced polyethylene sheets.

2.04 DISPOSAL BAGS

- A. Type: Minimum 6 mil thick, clear polyethylene bags with preprinted Caution Label. Properly containerize/drum prior to disposal.

2.05 EQUIPMENT

- A. Temporary lighting, heating, hot water heating units, ground fault interrupters, and all other equipment on site shall be UL listed and shall be safe, proper, and sufficient for the purpose intended.
- B. All electrical equipment shall be in compliance with the National Electric Code, Article 305 - Temporary Wiring.

PART 3 EXECUTION

3.01 PRE-WORK WIPE TESTING

- A. Testing: The Director's Representative will employ the services of an independent testing laboratory to perform the pre-work testing within the lead dust control work area and the areas adjacent to the lead dust control work area.
 - 1. The testing lab will be New York State Department of Health, Environmental Laboratory Accreditation Program (NYS ELAP).

3.02 EMPLOYEE PROTECTION

- A. Comply with all applicable Occupational Safety and Health Administration (OSHA) Requirements.

3.03 LEAD-CONTAINING/COATED MATERIAL HANDLING AND DISPOSAL

- A. Handle and dispose of lead-containing materials in accordance with OSHA 1926.62 and the approved lead-containing material work plan. Use procedures and equipment required to limit occupational and environmental exposure to lead when material containing or coated with lead containing paint is handled and disposed of in accordance with referenced standards.

3.04 POST-WORK WIPE TESTING

- A. Testing: The Director will employ the services of an independent testing laboratory to perform the post-work testing within the lead dust control work area and the areas adjacent to the lead dust control work area.
 - 1. The testing lab will be New York State Department of Health, Environmental Laboratory Accreditation Program (NYS ELAP).

3.05 CLEANING CRITERIA

- A. Cleaning criteria is separated into two categories; areas within the lead dust control work area, and areas adjacent to the lead dust control work area:
 - 1. Surfaces within the Lead Dust Control Work Area: In each area where the lead containing/coated materials have been disturbed, compare the post work wipe sample values with the pre work wipe sample values. If any of the sample values exceed the pre work values, clean again and schedule retesting until the lead levels are equal to or less than the pre work values or less than the HUD guidelines listed below. Any other surfaces inside the lead dust control work area that are not listed below shall be cleaned to the pre work values:
 - a. Floors: 40 micrograms of lead per square foot.
 - b. Window Sills: 250 micrograms of lead per square foot.
 - c. Window Troughs: 400 micrograms of lead per square foot.
 - d. Soil: 400 ppm in play areas and 1,200 ppm in bare soil in the remainder of the yard.
 - 2. Areas Adjacent to the Lead Dust Control Work Area: In each area where the work has been performed, compare the post work wipe sample values with the pre work wipe sample values. If any of the sample values

exceed the pre work values, the area has been contaminated by the work and cleaning is mandatory.

- a. Clean all affected surfaces and schedule retesting. If results still exceed pre work wipe sample values, clean again and schedule retesting until the following criteria is met or until the lead dust values are equal to or lower than the pre-work wipe sample values. Any affected surfaces that are not listed below shall be cleaned to pre-work levels.
 - 1) Floors: 40 micrograms of lead per square foot.
 - 2) Window Sills: 250 micrograms of lead per square foot.
 - 3) Window Troughs: 400 micrograms of lead per square foot.
 - 4) Soil: 400 ppm in play areas and 1,200 ppm in bare soil in the remainder of the yard.

3.06 CERTIFICATION OF CLEANING

- A. Schedule dust wipe testing with the Director's Representative at the site, when work area is ready for clearance testing.
- B. Director's Representative will employ the services of an independent testing lab to perform clearance testing.
 1. Prior to removal of any isolation barrier, the Director's Representative will obtain a written affidavit and a final assessment report from the lab stating that the tests conform to all standards set forth by all authorities having jurisdiction, mentioned in the references.
 2. Schedule a walk-through inspection with the Director's Representative and obtain his written approval.
- C. The Director's Representative shall have final determination of an acceptable clearance level.

3.07 PRE-DISPOSAL TESTING

- A. Prior to disposal, the Director's Representative will employ the services of an independent testing lab to perform clearance testing of the removed materials for toxicity in accordance with EPA Method 1311, Toxicity Characteristic Leaching Procedure (TCLP).
 1. Test results indicating a value greater than 5 ppm lead or 5mg/L classifies the removed material as Hazardous Waste.

3.08 DISPOSAL OF LEAD-CONTAINING/COATED MATERIAL AND RELATED DEBRIS

- A. Transport and dispose of lead-containing material classified as Hazardous Waste in accordance with the standards referenced in Part 1 of this Section.
- B. Transport and dispose of lead-containing material classified as Non- Hazardous Waste in accordance with the standards referenced in Part 1 of this Section.

3.09 RESTORATION

- A. Remove temporary decontamination facilities and restore area designated for these facilities to its original condition or better.
- B. Where existing construction is damaged or contaminated during the course of performing this project, restore area to its condition or better.

END OF SECTION