

SECTION 028333 – LEAD-BASED PAINT HAZARD REMOVAL, CONTROL AND WASTE MANAGEMENT

PART 1 - GENERAL

1.1 SUMMARY

A. DESCRIPTION

1. This Section specifies abatement and disposal of lead-based paint and controls needed to limit occupational and environmental exposure to lead hazards. The work is funded through the United States Department of Housing and Urban Development (HUD) and requires compliance with the Lead Safe Housing Rule, additionally, all work involving renovation, repair or painting activities is subject to the United States Department of Environmental Protection (U.S. EPA) Renovation, Repair and Repainting Rule (RRP) when referencing these laws and regulations, the more stringent requirements apply. All lead-hazards, which include friction, impact, and chewable surfaces containing lead-based paint; deteriorated lead-based paint, elevated levels of lead in dust; and or lead-in-soil, must be subject of abatement.
2. **The Contractor is required to follow all applicable federal, state, and local laws, all applicable regulations, and any requisite procedures. These regulations include, but are not limited to, those listed below in Sub-Section 1.3 Reference and Industry Standards.**

1.2 RELATED SECTIONS

- A. Section 024119 – Selective Demolition
- B. Section 099123 – Interior Painting

- 1.3 **PRE-CONSTRUCTION CONFERENCE:** The Contractor's representative must discuss in detail the lead-hazard removal and control paint removal work plan, including work procedures and precautions for the work plan with all employees, and protection of all visitors, occupants, and release to the environment, prior to the start of work and at regular intervals.

1.4 REFERENCE AND INDUSTRY STANDARDS

- A. The following reference standards shall be applicable to this Section:
 - New York City Department of Health and Mental Hygiene (DOHMH) Lead-Based Paint Standards – **current** edition.
 - New York City Department of Health and Mental Hygiene (DOHMH) Healthy Homes Program.
 - New York City Local Law 1 of 2004.
 - New York (State) Codes, Rules and Regulations (NYCRR).

B. Industry Standards

- **Electronic Code of Federal Regulations (e-CFR)**

- **24 CFR Part 35** [HUD Lead-Based Paint Poisoning Prevention in Certain Residential Structures]
- **29 CFR 1910.134 Respiratory Protection** [Title 29: Labor, Part 1910 – Occupational Safety and Health Administration, Respiratory Protection, Personal Protective Equipment]
- **29 CFR 1910.1025 Lead** [Title 29: Labor, Part 1910 – Occupational Safety and Health Administration]
- **29 CFR 1926.59 Hazard Communication** [Title 29: Labor, Part 1926 (Safety and Health Regulations for Construction)]
- **29 CFR 1926.62 Lead** [Title 29 (Labor) Subtitle B (Regulations Relating to Labor) Chapter XVII (Occupational Safety and Health Administration), Department of Labor) Part 1926 (Safety and Health Regulations for Construction)]
- **40 CFR 745, Section 65 Lead-Based Paint Hazards** [Title 40 (Protection of Environment) Chapter 1 Environmental Protection Agency, Subchapter R Toxic Substances Control Act, Part 745 Lead-Based Paint Poisoning Prevention in Certain Residential Structures]

- **Underwriters Laboratories (UL)**

- **UL 586** (Standard for Safety for High-Efficiency, Particulate, Air Filter Units)

1.5 DEFINITIONS

- A. Abatement: the purposes of this Specification, the term abatement shall refer to any procedure that impacts lead-containing paint on any surface, lead in dust and lead in soil. Procedures can include: paint removal; whole removal of the surface (i.e. window replacement); demolition and removal of painted surfaces; removal of dust containing elevated-lead-levels, removal of bare-soil containing elevated lead-levels; and clean-up of paint debris, and other activities designed to permanently eliminate lead-based paint hazards.
- B. Action Level: Employee exposure, without regard to use of respirations, to an airborne concentration of lead of 30 micrograms per cubic meter of air averaged over an 8-hour period. As used in this section, *30 micrograms per cubic meter of air* refers to the action level.
- C. Change Rooms and Shower Facilities: Rooms within the designated physical boundary around the lead control area equipped with separate storage facilities for clean protective work clothing and equipment and for street clothes which prevent cross- contamination, facilities for clean protective work clothing and equipment and for street clothes which prevent cross-contamination.

- D. Clearance: consist of a visual assessment, dust wipe samples and a written clearance or abatement report and must be performed by a U.S. EPA certified risk assessor, U.S. EPA certified lead-based paint inspector and is necessary to determine if a dwelling unit or work area is safe for re-occupancy.
- E. Clearance Threshold Levels: clearance for a floor surface = 40 µg/ft² (micrograms per square foot); clearance for an interior windowsill surface = 250 µg/ft²; and clearance for a window well surface = 400 µg/ft². Clearance or “passing” clearance can only be achieved when the required suite of the above samples are below/less than the threshold value.
- F. Decontamination Room: Room for removal of contaminated personal protective equipment (PPE).
- G. Dust Wipe Clearance Samples and Clearance Report: A dust wipe clearance sample is a sample taken by a third party (i.e., neither owner/developer nor contractor), prior to re-occupancy, on the basis of a minimum of 3 wipes per room, a floor sample, a window sill sample, and a window well sample. A clearance report must be able to indicate the samples passed and are below thresholds, or the work area must be re-cleaned.
- H. Eight-Hour Time Weighted Average (TWA): Airborne concentration of lead averaged over an 8-hour workday to which an employee is exposed.
- I. Exempt Properties: Properties exempt from the LSHR are Properties found not to have lead-based paint as a result of acceptable testing and evaluation methods, Properties where all lead-based paint has been removed using acceptable methods, Zero-bedroom units (including efficiencies, dormitories, rental of individual rooms), Rehabilitation that does not disturb painted surfaces, Unoccupied units to be demolished and Non-residential property (however, common areas shared with covered residences are not exempt).
- J. High Efficiency Particulate Air (HEPA) Filter Equipment: HEPA filtered vacuuming equipment with a **UL 586** filter system capable of collecting and retaining lead-contaminated paint dust. A high efficiency particulate filter means 99.97 percent efficient against 0.3 micron size particles.
- K. Lead: Metallic lead, inorganic lead compounds, and organic lead soaps. Excluded from this definition are other organic lead compounds.
- L. Lead Control Area: An enclosed area or structure with full containment to prevent the spread of lead dust, paint chips, or debris of lead-containing paint removal operations. The lead control area is isolated by physical boundaries to prevent unauthorized entry of personnel.
- M. Lead-Based Paint Hazards: Paint-lead hazard, dust-lead hazard or soil-lead hazard as identified in **40 CFR 745, Section 65**.
- N. Lead Permissible Exposure Limit (PEL): Fifty micrograms per cubic meter of air as an 8-hour time weighted average as determined by **29 CFR 1910.1025**. If an employee is exposed for more than 8 hours in a workday, the PEL shall be determined by the following formula. PEL (micrograms/cubic meter of air) = 400/No. of hrs. worked per day.
- O. Personnel Monitoring: Sampling of lead concentrations within the breathing zone of an employee to determine the 8-hour time weighted average concentration in accordance with **29 CFR 1910.1025**. Samples shall be representative of the employee's work tasks. Breathing zone shall

be considered an area within a hemisphere, forward of the shoulders, with a radius of 150 mm to 225 mm (6 to 9 inches) and the center at the nose or mouth of an employee.

- P. Restricted Practices: The EPA restricts: open flame burning or torching; heat guns above 1100 degrees F; machine removal without HEPA vacuum attachment; and additionally HUD restricts, any heat guns that can char paint; dry scraping or sanding except when the area is within 1 ft. of an electrical outlet; and the use of methylene chloride, or any other volatile stripper in a space without appropriate and proper ventilation.
- Q. Target Housing: Residential real property which is housing constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any one or more children age 6 years or under resides or is expected to reside, or visit the facility for more than 60 hours per year, in such housing for the elderly or persons with disabilities) or any 0 bedroom dwelling.
- R. Wipe Sampling: Clearance testing procedures, conducted by a U.S. EPA certified risk assessor, U.S. EPA certified lead-based paint inspector, which determine the amount of existing lead-containing paint surface dust by atomic absorption spectroscopy analysis, or inductively coupled plasma emission spectrometry expressed in micrograms of lead per unit surface area.

1.3 QUALITY ASSURANCE

- A. Before exposure to lead-contaminated dust, provide workers with a comprehensive medical examination as required by **29 CFR 1926.62**. The examination shall not be required if adequate records show that employees have been examined as required by **29 CFR 1926.62** within the last year.
- B. **The Contractor will be responsible to:**
 - 1. Provide valid US EPA training certificates and licenses for all employees conducting rehabilitation, renovation, repair or painting operations.
 - 2. Develop a lead-containing paint removal plan for conformance to the applicable laws, regulations, and referenced standards.
 - 3. Inspect or cause to inspect lead-containing paint removal work for conformance with the approved plan.
 - 4. Directly monitor operations.
 - 5. Ensure work is performed in strict accordance with specifications at all times.
 - 6. Ensure hazardous exposure to personnel, visitors, and occupants, and release to the environment are adequately controlled at all times.
- C. Training: Train each employee performing paint removal, disposal, and air sampling operations prior to the time of initial job assignment, in accordance with **29 CFR 1926.62**.
- D. Respiratory Protection Program
 - 1. Furnish each employee required to wear a negative pressure respirator or other appropriate type with a respirator fit test at the time of initial fitting and at least every 6 months thereafter as required by **29 CFR 1926.62**.

2. Establish and implement a respiratory protection program as required by **29 CFR 1910.134, 29 CFR 1910.1025, and 29 CFR 1926.62.**
- E. Hazard Communication Program: Establish and implement a Hazard Communication Program as required by **29 CFR 1926.59**. In addition, the Contractor shall post:
1. Warning Signs. Warning signs shall be provided at approaches to lead control areas. Signs shall be located at a distance from the lead control areas that will allow personnel to read the sign and take the necessary protective actions required before entering the lead control area. The signs shall comply with the requirements of **29 CFR Part 1926.62**.
 2. Worker Information. Right-to-know notices shall be placed in clearly visible areas of the work site in compliance with federal, state and local regulations.
 3. Air Monitoring Results. Air monitoring results shall be prepared in order to be easily understood by the workers and shall be placed in a clearly visible area of the work site.
 4. Emergency Telephone Numbers. A list of telephone numbers shall be posted at the site. The list shall include numbers of the local hospital, emergency squad, police and fire departments, Government and Contractor representatives who can be reached 24 hours per day and professional consultants directly involved in the project.
- F. Waste Management: The Lead-Based Paint Hazard Removal and Control Waste Management plan shall comply with applicable requirements of federal, state, and local laws, regulations, codes and ordinances pertaining to the generation of toxic, hazardous, universal and solid wastes and address:
1. Identification of hazardous wastes associated with the work.
 2. Estimated quantities of wastes to be generated and disposed of.
 3. Names and qualifications of each contractor that will be transporting, storing, treating, and disposing of the wastes. Include the facility location and a 24-hour point of contact.
 4. Names and qualifications (experience and training) of personnel who will be working on-site with hazardous and/or regulated wastes.
 5. List of waste handling equipment to be used in performing the work, to include cleaning, volume reduction, and transport equipment.
 6. Spill prevention, containment, and cleanup contingency measures to be implemented.
 7. Work plan and schedule for waste containment, removal and disposal. Wastes shall be cleaned up and containerized daily.
- G. Safety and Health Compliance:
1. In addition to the detailed requirements of this specification, comply with laws, ordinances, rules, and regulations of federal, state, and local authorities regarding removing, handling, storing, transporting, and disposing of lead or lead-containing waste materials. Comply with the applicable requirements of the current issue of **29 CFR 1910.1025**.
 2. Where specification requirements and the referenced documents vary, the most stringent requirements shall apply.

1.4 SUBMITTALS

- A. Instructions: Contractor shall adhere to requirements of all government agencies having jurisdiction over the work.
- B. Statements Certifications and Statements: Contractor shall adhere to requirements of all governmental agencies having jurisdiction over the work.
 - 1. Qualifications of employees: Submit name, address, and telephone number and copies of all requisite licenses.
 - 2. Testing Laboratory: Submit the name, address, and telephone number of the testing laboratory selected to perform the monitoring, testing, and reporting of airborne concentrations of lead. Provide proper documentation that persons performing the analysis have been judged proficient by successful participation within the last year in the National Institute for Occupational Safety and Health (NIOSH) Proficiency Analytical Testing (PAT) Program. The laboratory shall be accredited by the American Industrial Hygiene Association (AIHA). Provide AIHA documentation along with date of accreditation/reaccreditation.
 - 3. Lead-Hazard Removal and Control Plan.
 - a. Lead-Containing Paint Removal Plan include a sketch showing the location, size, and details of lead control areas, location and details of decontamination rooms, change rooms, shower facilities, and mechanical ventilation system.
 - b. Include in the plan, eating, drinking, smoking and restroom procedures, interface of trades, sequencing of lead related work, collected wastewater and paint debris disposal plan, air sampling plan, respirators, protective equipment, and a detailed description of the method of containment of the operation to ensure that airborne lead concentrations of 30 micrograms per cubic meter of air are not exceeded outside of the lead control area.
 - c. Include air and wipe sampling, training and strategy, sampling methodology, frequency, duration of sampling, and qualifications of sampling personnel in the sampling portion on the plan.
 - 4. Field Test Reports: Monitoring Results: Have and maintain monitoring results on-site within 3 working days of the test event or prior to occupancy, as required; they shall be signed by the testing laboratory employee performing the air monitoring, the employee that analyzed the sample.
 - 5. Records:
 - a. Completed and signed hazardous waste manifest from treatment or disposal facility.
 - b. Certification of Medical Examinations.
 - c. Employee training certification.
 - 6. Submit applicable Material Safety Data Sheets (MSDS) for paint removal products used in paint removal work.

PART 2 - DELETED.

PART 3 – DELETED.

END OF SECTION 028333