



**LEAD ABATEMENT SPECIFICATIONS
FOR THE REMOVAL OF LEAD-BASED PAINT**

**MARSHALL COURTS
741 34TH STREET
NEWPORT NEWS, VIRGINIA**

ECS PROJECT NO. 47:3961

FOR

VIA DESIGN ARCHITECTS, PC

JUNE 21, 2017

**LEAD ABATEMENT SPECIFICATIONS
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For

Marshall Courts – Phase IV and V
741 34th Street
Newport News, Virginia

ECS Project No. 47:3961

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SECTION 13283 REMOVAL AND DISPOSAL OF LEAD-CONTAINING PAINT

PART 1 – GENERAL

1.1 REFERENCES

The publications listed below form a part of this Risk Assessment Plan to the extent referenced. The publications are referred within the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

- | | |
|------------|---|
| ANSI Z9.2 | (1979; R 1991) Fundamentals Governing the Design and Operation of Local Exhaust Systems |
| ANSI Z88.2 | (1992) Respiratory Protection |

CODE OF FEDERAL REGULATIONS (CFR)

- | | |
|-----------------|---|
| 29 CFR 1926.21 | Safety Training and Education |
| 29 CFR 1926.33 | Access to Employee Exposure and Medical Records |
| 29 CFR 1926.55 | Gases, Vapors, Fumes, Dusts, and Mists |
| 29 CFR 1926.59 | Hazard Communication |
| 29 CFR 1926.62 | Lead Exposure in Construction |
| 29 CFR 1926.65 | Hazardous Waste Operations and Emergency Response |
| 29 CFR 1926.103 | Respiratory Protection |
| 40 CFR 260 | Hazardous Waste Management Systems: General |
| 40 CFR 261 | Identification and Listing of Hazardous Waste |
| 40 CFR 262 | Generators of Hazardous Waste |
| 40 CFR 263 | Transporters of Hazardous Waste |
| 40 CFR 264 | Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities |
| 40 CFR 265 | Interim Status Standard for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities |

- 40 CFR 268 Land Disposal Restrictions
- 40 CFR 745 Lead; Requirements for Lead-Based Paint Activities
- 49 CFR 172 Hazardous Materials, Tables, and Hazardous Materials Communications Regulations
- 49 CFR 178 Shipping Container Specification

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

- HUD Guidelines (1995) Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing

UNDERWRITERS LABORATORIES INC. (UL)

- UL 586 (1996) High-Efficiency, Particulate, Air Filter Units

1.2 DEFINITIONS

1.2.1 Action Level

Employee exposure, without regard to use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air averaged over an 8 hour period in an occupational/industrial environment.

1.2.2 Area Sampling

Sampling of lead concentrations within the lead control area and inside the physical boundaries which is representative of the airborne lead concentrations but is not collected in the breathing zone of personnel.

1.2.3 Competent Person (CP)

As used in this section, refers to a person employed by the Contractor who is trained in the recognition and control of lead hazards in accordance with current federal, State, and local regulations. An industrial hygienist or safety professional certified for comprehensive practice by the American Board of Industrial Hygiene or by the Board of Certified Safety Professionals is the best choice.

1.2.4 Contaminated Room

Room for removal of contaminated personal protective equipment (PPE).

1.2.5 Decontamination Shower Facility

That facility that encompasses a clean clothing storage room, and a contaminated clothing storage and disposal rooms, with a shower facility in between.

1.2.6 Eight-Hour Time Weighted Average (TWA)

Airborne concentration of lead to which an employee is exposed, averaged over an 8 hour workday as indicated in 29 CFR 1926.62.

1.2.7 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 or larger size particles.

1.2.8 Lead

Metallic lead, inorganic lead compounds, and organic lead soaps.

1.2.9 Lead-Based Paint (LBP)

Paint or other surface coating that contains lead in excess or equal to 1.0 milligrams per centimeter squared or 0.5 percent by weight.

1.2.10 Lead-Based Paint Hazard (LBP Hazard)

Any condition that causes exposure to lead from lead-contaminated dust, lead-contaminated soil, lead-based paint that is deteriorated or present in accessible surfaces, friction surfaces, or impact surfaces that would result in adverse human health effects.

1.2.11 Lead-Containing Paint (LCP)

Lead-based paint or other similar surface coating containing lead or lead compound in excess of 0.009 percent by weight of the total nonvolatile content of the paint.

1.2.12 Lead Control Area

An enclosed area or structure, constructed as a temporary containment equipped with HEPA filtered local exhaust, which prevents the spread of lead dust, paint chips, or debris existing as a condition of lead-based paint removal operations. The lead control area is also isolated by physical boundaries to prevent unauthorized entry of personnel.

1.2.13 Lead Permissible Exposure Limit (PEL)

Fifty micrograms per cubic meter of air as an 8 hour time weighted average as determined by 29 CFR 1926.62. If an employee is exposed for more than eight hours in a work day, the PEL shall be determined by the following formula:

$$\text{PEL (micrograms/cubic meter of air)} = 400/\text{No. hrs worked per day}$$

1.2.14 Owners Industrial Hygienist (OIH)

Third party Virginia licensed Lead Risk Assessor professional hired by the authority.

1.2.14 Personal Sampling

Sampling of airborne lead concentrations within the breathing zone of an employee to determine the 8 hour time weighted average concentration in accordance with 29 CFR 1926.62. Samples shall be representative of the employees' work tasks. Breathing zone shall be considered an area within a hemisphere, forward of the shoulders, with a radius of 6 to 9 inches and centered at the nose or mouth of an employee.

1.2.15 Physical Boundary

Area physically roped or partitioned off around an enclosed lead control area to limit unauthorized entry of personnel. As used in this section, "inside boundary" shall mean the same as "outside lead control area but inside boundary."

1.3 SCOPE OF WORK

- A. The Scope of Work includes, but is not necessarily limited, to the following:
- 1) The Abatement Contractor shall be responsible for removal of all lead-based painted materials in each unit. These materials include bathroom tubs, sinks, toilets, pipes, exterior window casings (to include all original painted window components); exterior and interior door casings, interior doors, interior attic door casing/trim, porch ceilings, newel post, rails and decorative columns, and rake board.
 - 2) The Abatement Contractor has the responsibility for determining actual quantities of materials to be removed and reviewing the scope of work. The Contractor should allow under their base bid for the removal of the materials as described in the survey report and/or referenced in this Risk Assessment Plan. The Contractor shall remove lead-based painted materials as a LUMP Sum; no change orders will be allowed.
 - 3) All mobilizations and permit notifications shall be the Abatement Contractors responsibility.
 - 4) This section includes the work necessary to reduce lead dust to the specified level and maintain the specified lead control limits during the life of the contract. It also contains removal, containment, and disposal of lead-based materials. The work specified in this document consists of the provision of services for the removal and disposal of lead-based building materials. Lead-Based materials have been identified in the areas where work will be performed.

- 5) Lead abatement work will be performed by competent personnel, licensed (by the Virginia Department of Professional and Occupational Regulation) persons trained, qualified, and knowledgeable in the techniques of abatement, handling, and disposal of LBP and materials contaminated by lead, in accordance with pertinent local, state, and federal regulations.
- 6) The Abatement Contractor shall remove the following materials:
 - a) LBP/Lead-Containing bathroom sinks, toilets, and tubs. The Abatement Contractor shall remove these materials intact without a negative pressure containment as described in Part 3 – Execution of this document.
 - b) LBP exterior metal window and door casings/trip, rake boards, rails, porch ceiling, newel post, rails, and pipe. The Abatement Contractor shall place two layers of 6 mil poly around the perimeter of the building where windows and doors casings and other components are to be removed as drop cloths. Poly shall extend out from the building approximately 10 feet. The Abatement Contractor shall seal the interior of the structure with two layers of 6 mil poly at each opening where a LBP component is to be removed. The Abatement Contractor shall remove each component intact without breaching the poly barrier protecting the interior of each unit. Following completion of removal, the contractor shall clean and remove all visible debris from the removal area. No visible dust shall remain. If a breach occurs the contractor is responsible for cleaning and decontamination of each unit. The OIH will conduct clearance testing of each unit where a breach has occurred. The contractor shall continue cleaning and decontaminating at no cost to the owner, until each unit has passed acceptable US EPA/HUD clearance levels. All OIH and analytical fees shall also be charged to the contractor.
 - c) LBP interior wood doors, door trim, and attic doors casing. The Abatement Contractor shall remove these materials within a full containment as described in Part 3 – Execution of this document.
 - d) Following the completion of all interior and exterior renovation activities and immediately prior to returning the unit over to the authority a final cleaning of the unit shall be performed to include a TSP wipe down of all horizontal surfaces. A limited dust wipe sampling event will be conducted by the OIH to verify the levels of lead in dust are below the US EPA/HUD clearance criteria; if a sample fails the contractor shall clean the entire unit; The contractor shall continue cleaning and decontaminating at no cost to the owner until each unit has passed acceptable US EPA/HUD clearance levels.

Note 1: If during the course of the abatement work, a breach occurs on the drop cloth or the OIH observes contamination of the soil surrounding the units (or exterior porches) the contractor shall be responsible for cleaning and decontaminating the soil and/or porch at no additional cost to the owner (including soil removal) to the satisfaction of the OIH.

1.4 QUALITY CONTROLS

- A. The LBP removal Contractor's superintendent/VA licensed supervisor shall be on the job each day during removal and he shall be knowledgeable, experienced and competent in this type of work.
- B. The LBP removal Contractor shall be responsible for any damage to the units and its contents resulting from leakage or spillage of water.
- C. The contractor shall notify at no cost to the owner all local, state, and federal authorities regarding this project.
- D. The Owner reserves the right to halt the project work until hazardous or potentially hazardous conditions are corrected.
- E. The Owner reserves the right to independently perform such analysis and tests at any time as he deems necessary to ensure and protect safety of the project.

1.5 SUBMITTALS

- A. Immediately upon award of the contract, and before a notice to proceed is issued, the Contractor shall submit for information of the Owner and Engineer the data listed below and shall be in quantity to allow the Owner to retain two copies and the Engineer to retain one copy. The data shall be in compliance with the requirements of the Contract Document and governing regulations.
 - a. Product Data
 - i. Vacuum filters
 - ii. Respirators
 - iii. Test Reports
 - iv. Sampling results
 - v. Assessment data report
 - b. Certificates
 - i. Qualifications of CP
 - ii. Testing laboratory qualifications
 - iii. Third party consultant qualifications
 - c. Lead-Based Paint/Lead-Containing Paint Removal Plan including CP approval (signature, date, and certification number)

- d. Rental equipment notification
- e. Respiratory protection program
- f. Hazard communication program
- g. EPA approved hazardous waste treatment or disposal facility for lead disposal
- h. Hazardous waste management plan
- i. Manufacturer's Instructions
 - i. Chemicals and equipment
 - ii. Materials
 - iii. Safety data sheets for all chemicals
- j. Closeout Submittals
- k. Completed and signed hazardous waste manifest from treatment or disposal facility
- l. Certification of medical examinations
- m. Employee training certification

1.6 QUALIFICATIONS OF CP

Submit name, address, and telephone number of the CP selected to perform responsibilities specified in paragraph entitled "Competent Person (CP) Responsibilities." Provide previous experience of the CP. Submit proper documentation that the CP is trained and licensed in Virginia in accordance with Federal, State, and local laws.

1.7 TESTING LABORATORY

Submit the name, address, and telephone number of the testing laboratory selected to perform the testing and reporting of lead. Use a laboratory accredited under the EPA National Lead Laboratory Accreditation Program (NLLAP) by either the American Association for Laboratory Accreditation (A2LA) or the American Industrial Hygiene Association (AIHA) and that is successfully participating in the Environmental Lead Proficiency Analytical Testing (ELPAT) program to perform sample analysis. Note: The OIH will conduct all clearance sampling.

1.8 LEAD-BASED PAINT/LEAD-CONTAINING PAINT REMOVAL PLAN LBP/LCPRP)

Submit a detailed job-specific plan of the work procedures to be used in the removal of LBP/LCP. The plan shall include a sketch showing the location, size, and details of lead control areas, location and details of decontamination facilities, viewing ports, and mechanical ventilation system. Include in the plan, eating, drinking, smoking and sanitary procedures, interface of trades, sequencing of lead related work, collected waste water and paint debris disposal plan, air sampling plan, respirators, personal 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 [and baseline lead dust/soil concentrations] are not reached or exceeded outside of the lead control area. Include site preparation and cleanup procedures. Include occupational and environmental sampling, training and strategy, sampling methodology, frequency, duration of sampling, and qualifications of sampling personnel in the air sampling portion of the plan.

1.9 OCCUPATIONAL AND ENVIRONMENTAL SAMPLING RESULTS

Submit occupational and environmental sampling results to VIA Design Architects, PC within three working days of collection, signed by the testing laboratory responsible official, the employee that performed the sampling, and the CP.

- a. The sampling results shall represent each job classification, or if working conditions are similar to previous jobs by the same employer, provide previously collected exposure data that can be used to estimate worker exposures in accordance with 29 CFR 1926.62. The data shall represent the worker's regular daily exposure to lead.
- b. Submit worker exposure data conducted during the task based trigger operations of 29 CFR 1926.62.
- c. The initial monitoring shall determine the requirements for further monitoring and the need to fully implement the control and protective requirements including the compliance program (LBP/LCP) in accordance with 29 CFR 1926.62.

1.10 OCCUPATIONAL AND ENVIRONMENTAL ASSESSMENT DATA REPORT

Some LBP/LCP removal work may not require full implementation of the requirements of 29 CFR 1926.62. Based on the experience of the Contractor and/or the use of a specific process or method for performing the work, the Contractor may be able to provide historic data (previous 12 months) to demonstrate that airborne exposures are controlled below the action level. Such methods or controls shall be fully presented in the LBP/LCPRP. To reduce the full implementation of 29 CFR 1926.62, the Contractor shall provide documentation in an Assessment Data Report.

Submit occupational and environmental assessment report to the VIA Design Architects, PC prior to start of work, signed by the testing laboratory responsible official, and the CP.

- a. Submit a report that supports the determination regarding the reduction of the need to fully implement the requirements of 29 CFR 1926.62 and supporting the LBP/LCP. The exposure assessment shall represent each job classification, or if working conditions are similar to previous jobs by the same employer, provide previously collected exposure data that can be used to estimate worker exposures in accordance with 29 CFR 1926.62. The data shall represent the worker's regular daily exposure to lead for stated work.
- b. Submit worker exposure data conducted during the task based trigger operations of 29 CFR 1926.62 with a complete process description in supporting a negative assessment.

- c. The initial assessment shall determine the requirement for further monitoring and the need to fully implement the control and protective requirements including the compliance program (LBP/LCPRP) in accordance with 29 CFR 1926.62.

1.11 QUALITY ASSURANCE

1.11.1 Medical Examinations

Initial medical surveillance as required by 29 CFR 1926.62 shall be made available to all employees exposed to lead at any time (1 day) above the action level. Full medical surveillance shall be made available to all employees on an annual basis who are or may be exposed to lead in excess of the action level for more than 30 days a year or as required by 29 CFR 1926.62. Adequate records shall show that employees meet the medical surveillance requirements of 29 CFR 1926.33, 29 CFR 1926.62, and 29 CFR 1926.103.

1.11.1.1 Medical Records

Maintain complete and accurate medical records of employees for a period of at least 30 years or for the duration of employment plus 30 years, whichever is longer.

1.11.1.2 Medical Surveillance

Provide medical surveillance to all personnel exposed to lead as indicated in 29 CFR 1926.62.

1.11.2 Competent Person (CP) Responsibilities

- a. Certify training as meeting all federal, State, and local requirements.
- b. Review and approve lead-based paint/lead-containing paint removal plan for conformance to the applicable referenced standards.
- c. Continuously inspect lead-based paint removal work for conformance with the approved plan.
- d. Perform air and wipe sampling.
- e. Ensure work is performed in strict accordance with the risk assessment plan at all times.
- f. Control work to prevent hazardous exposure to human beings and to the environment at all times.
- g. Certify the conditions of the work as called for elsewhere in this risk assessment plan.

1.11.3 Training

Train each employee performing paint removal, disposal, and air sampling operations prior to the time of initial job assignment and annually thereafter, in accordance with 29 CFR 1926.21, 29 CFR 1926.62, and State and local regulations.

1.11.3.1 Training Certification

Submit a certificate for each employee, signed and dated by the approved training source, stating that the employee has received the required lead training.

1.11.4 Respiratory Protection Program

- a. 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 annually thereafter as required by 29 CFR 1926.62.
- b. Establish and implement a respiratory protection program as required by ANSI Z88.2, 29 CFR 1926.103, 29 CFR 1926.62, and 29 CFR 1926.55.

1.11.5 Hazard Communication Program

Establish and implement a Hazard Communication Program as required by 29 CFR 1926.59.

1.11.6 Hazardous Waste Management

The Hazardous Waste Management Plan shall comply with applicable requirements of federal, State, and local hazardous waste regulations and address:

- a. Identification and classification of hazardous wastes associated with the work.
- b. Estimated quantities of wastes to be generated and disposed of.
- c. Names and qualifications of each contractor that will be transporting, storing, treating, and disposing of the wastes. Include the facility location, operator and a 24-hour point of contact. Furnish two copies of EPA, State and local hazardous waste permit applications, permits, manifests and EPA Identification numbers.
- d. Names and qualifications (experience and training) of personnel who will be working on-site with hazardous wastes.
- e. List of waste handling equipment to be used in performing the work, to include cleaning, volume reduction, and transport equipment.

- f. Spill prevention, containment, and cleanup contingency measures including a health and safety plan to be implemented in accordance with 29 CFR 1926.65.
- g. Work plan and schedule for waste containment, removal and disposal. Wastes shall be cleaned up and containerized daily.
- h. Unit cost for hazardous waste disposal according to this plan.

1.11.7 Environmental, Safety and Health Compliance

In addition to the detailed requirements of this risk assessment plan, comply with laws, ordinances, rules, and regulations of Federal, State, and local authorities regarding removing, handling, storing, transporting, and disposing of lead waste materials. Comply with the applicable requirements of the current issue of 29 CFR

Submit matters regarding interpretation of standards to the VIA Design Architects, PC for resolution before starting work. Where risk assessment plan requirements and the referenced documents vary, the most stringent requirement shall apply. The following local, state, and federal laws, ordinances, criteria, rules and regulations regarding removing, handling, storing, transporting, and disposing of lead-contaminated materials apply. These regulation include but not are limited to:

- a. 18 VAC 15-30
- b. 40 CFR Part 745
- c. 24 CFR Part 35

Licensing and certification in the Commonwealth of Virginia is required.

1.11.8 Pre-Construction Conference

Along with the CP, meet with the VIA Design Architects, PC to discuss in detail the hazardous waste management plan and the lead-based paint, including work procedures and precautions for the removal plan.

1.12 EQUIPMENT

1.12.1 Respirators

Furnish appropriate respirators approved by the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services, for use in atmospheres containing lead dust. Respirators shall comply with the requirements of 29 CFR 1926.62 and 29 CFR 1910.134.

1.12.2 Special Protective Clothing

Furnish personnel who will be exposed to lead-contaminated dust with proper disposable uncontaminated, reusable protective whole body clothing, head

covering, gloves, and foot coverings as required by 29 CFR 1926.62. Furnish proper disposable plastic or rubber gloves to protect hands. Reduce the level of protection only after obtaining approval from the CP.

1.12.3 Rental Equipment Notification

If rental equipment is to be used during lead-based paint handling and disposal, notify the rental agency in writing concerning the intended use of the equipment. Furnish a copy of the written notification to VIA Design Architects, PC.

1.12.4 Vacuum Filters

UL 586 labeled HEPA filters.

1.13 REMOVAL

1.13.1 Title to Materials

Materials resulting from demolition work, except as specified otherwise, shall become the property of the Contractor and shall be disposed of in accordance with all Federal, State and local requirements except as specified herein.

PART 2 – PRODUCTS

2.1 CHEMICALS

Submit applicable Safety Data Sheets for all chemicals used in paint removal work. Use the least toxic product approved by VIA Design Architects, PC.

2.2 MATERIALS

The soluble metal content and the total metal content shall not exceed values which would cause a material to be classified as a hazardous waste.

PART 3 – EXECUTION

3.1 PROTECTION

3.1.1 Notification

Notify VIA Design Architects, PC 10 days prior to the start of any paint removal work.

3.1.2 Lead Control Area Requirements

Establish a lead control area by situating critical barriers and physical boundaries around the area or structure where LBP removal operations will be performed

Full containment - Contain removal operations by the use of critical barriers and HEPA filtered exhaust, a negative pressure enclosure system with decontamination facilities and with HEPA filtered exhaust if required by the CP. For containment areas larger than 1,000 square feet install a minimum of two 18 inch square viewing ports. Locate ports to provide a view of the required work from the exterior of the enclosed contaminated area. Glaze ports with laminated safety glass.

3.1.3 Protection of Existing Work to Remain

Perform paint removal work without damage or contamination of adjacent areas. Where existing work is damaged or contaminated, restore work to its original condition or better.

3.1.4 Boundary Requirements

Provide physical boundaries around the lead control area by roping off the area designated in the work plan or providing curtains, portable partitions or other enclosures to ensure that airborne concentrations of lead will not reach 30 micrograms per cubic meter of air outside of the lead control area.

3.1.4.1 Physical Boundary

Provide physical boundaries around the lead control area by roping off the area designated in the work plan or providing curtains, portable partitions or other enclosures to ensure that airborne concentrations of lead will not reach 30 micrograms per cubic meter of air outside of the lead control area.

3.1.4.2 Warning Signs

Provide warning signs at approaches to lead control areas. Locate signs at such a distance that personnel may read the sign and take the necessary precautions before entering the area. Signs shall comply with the requirements of 29 CFR 1926.62.

3.1.5 Furnishings

Protect and cover furnishings or remove furnishings from the work area and store in a location approved by VIA Design Architects, PC.

3.1.6 Heating, Ventilating and Air Conditioning (HVAC) Systems

Shut down, lock out, and isolate HVAC systems that supply, exhaust, or pass through the lead control areas. Seal intake and exhaust vents in the lead control area with 6 mil plastic sheet and tape. Seal seams in HVAC components that pass through the lead control area.

3.1.7 Decontamination Shower Facility

Provide clean and contaminated change rooms and shower facilities in accordance with this risk assessment plan and 29 CFR 1926.62.

3.1.8 Eye Wash Station

Where eyes may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes shall be provided within the work area.

3.1.9 Mechanical Ventilation System

- a. Use adequate ventilation to control personnel exposure to lead in accordance with 29 CFR 1926.62.
- b. To the extent feasible, use fixed local exhaust ventilation connected to HEPA filters or other collection systems, approved by the CP. Local exhaust ventilation systems shall be designed, constructed, installed, and maintained in accordance with ANSI Z9.2.
- c. Vent local exhaust outside the building only and away from building ventilation intakes.
- d. Use locally exhausted, power actuated, paint removal tools.

3.1.10 Personnel Protection

Personnel shall wear and use protective clothing and equipment as specified herein. Eating, smoking, or drinking or application of cosmetics is not permitted in the lead control area. No one will be permitted in the lead control area unless they have been appropriately trained and provided with protective equipment.

3.2 WORK PROCEDURES

Perform removal of lead-based paint in accordance with approved lead-based paint/lead-containing paint removal plan. Use procedures and equipment required to limit occupational and environmental exposure to lead when lead-based paint is removed in accordance with 29 CFR 1926.62, except as specified herein. Dispose of removed paint chips and associated

waste in compliance with Environmental Protection Agency (EPA), federal, State, and local requirements.

3.2.1 Personnel Exiting Procedures

Whenever personnel exit the lead-controlled area, they shall perform the following procedures and shall not leave the work place wearing any clothing or equipment worn during the work day:

- a. Vacuum themselves off.
- b. Remove protective clothing in the contaminated change room, and place them in an approved impermeable disposal bag.
- c. Shower or a wash station.
- d. Wash hands and face at the site, don appropriate disposable or uncontaminated reusable clothing; move to an appropriate facility; shower.
- e. Change to clean clothes prior to leaving the physical boundary designated around the lead control area.

3.2.2 Air Sampling

Air sample for lead in accordance with 29 CFR 1926.62 and as specified herein. Air sampling shall be directed or performed by the CP.

- a. The CP shall be on the job site directing the air and non-clearance wipe sampling and inspecting the lead-based paint removal work to ensure that the requirements of the contract have been satisfied during the entire lead-based paint removal operation.
- b. Collect personal air samples on employees who are anticipated to have the greatest risk of exposure as determined by the CP. In addition, collect air samples on at least 25 percent of the work crew or a minimum of two employees, whichever is greater, during each work shift.
- c. Submit results of air samples, signed by the CP, within 72 hours after the air samples are taken. Notify VIA Design Architects, PC immediately of exposure to lead at or in excess of the action level of 30 micrograms per cubic meter of air outside of the lead control area.

3.2.3 Lead-Based Paint Removal

Manual or power sanding of interior and exterior surfaces is not permitted. Provide methodology for removing LBP in work plan. Remove paint within the areas designated on the drawings in order to completely expose the substrate. Take whatever precautions necessary to minimize damage to the underlying substrate.

1. Wood, Drywall, Interior Partitions

- a. Scraping
- b. Heat Stripping
- c. Chemical Stripping
- d. Power Tool Cleaning (least acceptable)
- e. Wet Abrasive Blasting

Chemical stripping should be carefully researched as a removal method for soft wood (e.g., pine or redwood) substrates. The wrong chemical strippers can increase the risk of residual lead contamination in the substrate.

2. Steel and Metal Surfaces (Industrial)
 - a. Power/Hand Tool Cleaning (least acceptable)
 - b. Dry Abrasive Blast with Water Ring (Wet "Halo")
 - c. Wet Abrasive Blast
 - d. Low Volume High Pressure Water Blast
 - e. Chemical Stripping
 - f. Vacuum Blast

The following practices are restricted during lead hazard abatement work on housing per 40 CFR 745: Open flame burning or torching is prohibited; machine sanding or grinding or abrasive blasting on LBP is prohibited unless used with High Efficiency Particulate Air (HEPA) exhaust control; dry scraping in conjunction with heat guns, or around electrical outlets, is permitted if limited to no more than 2 square feet in any one room (20 square feet on exterior surfaces); heat guns must operate at temperatures below 1100 degrees Fahrenheit.

Provide methodology for removing LBP/LCP removal processes to minimize contamination of work areas outside the control area with lead-contaminated dust or other lead-contaminated debris/waste and to ensure that unprotected personnel are not exposed to hazardous concentrations of lead. Describe this LBP/LCP removal process in the LBP/LCPRP.

3.2.3.1 Indoor Lead Paint Removal

Perform manual paint removal in lead control areas using enclosures, barriers, or containments and powered locally exhausted paint removal tools. Collect residue debris for disposal in accordance with federal, State, and local requirements.

3.2.3.2 Outdoor Lead Paint Removal

Perform outdoor removal as indicated in federal, State, and local regulations and in the LBP/CPRP. The removal of exterior LBP will be conducted from the exterior portion of each unit. The contractor will place two 6 mil poly on the interior of the apartment unit on each window and door area.

3.2.3.3 Sampling After Paint Removal

After the visual inspection of interior LBP removal, collect wipe samples according to the HUD protocol contained in HUD Guidelines to determine

the lead content of settled dust and dirt in micrograms per square foot of surface area and parts per million (ppm).

3.2.4 Cleanup and Disposal

3.2.4.1 Cleanup

Maintain surfaces of the lead control area free of accumulations of paint chips and dust. Restrict the spread of dust and debris; keep waste from being distributed over the work area. Do not dry sweep or use compressed air to clean up the area. At the end of each shift and when the paint removal operation has been completed, clean the area of visible lead paint contamination by vacuuming with a HEPA filtered vacuum cleaner, wet mopping the area and wet wiping the area as indicated by the CP. Re-clean areas showing dust or residual paint chips or debris. After visible dust, chips and debris is removed, wet wipe and HEPA vacuum all surfaces in the work area. If adjacent areas become contaminated at any time during the work, clean, visually inspect, and then wipe sample all contaminated areas. The CP shall then certify in writing that the area has been cleaned of lead contamination before restarting work.

3.2.4.2 Clearance Certification

The CP shall certify in writing that all air samples collected inside and outside the lead control area are less than 30 micrograms per cubic meter of air; the respiratory protection used for the employees was adequate; the work procedures were performed in accordance with 29 CFR 1926.62 and 40 CFR 745; and that there were no visible accumulations of material and dust containing lead left in the work site. Do not remove the lead control area or roped off boundary and warning signs prior to VIA Design Architects, PC's acknowledgement of receipt of the CP certification.

The OIH shall collect surface wipe samples inside the work area as appropriate. Levels shall meet US EPA/HUD clearance criteria. If the samples fail clearance criteria the contractor shall continue cleaning and decontaminating at no cost to the owner until each unit has passed acceptable US EPA/HUD clearance levels. All OIH and analytical fees shall also be charged to the contractor.

3.2.4.3 Disposal

- a. Collect lead-contaminated waste, scrap, debris, bags, containers, equipment, and lead-contaminated clothing which may produce airborne concentrations of lead particles. Label the containers in accordance with 29 CFR 1926.62 and 40 CFR 261. Dispose of lead-contaminated waste material at an approved Commonwealth of Virginia landfill and/or EPA approved hazardous waste treatment and storage.
- b. Handle, store, transport, and dispose lead or lead-contaminated waste in accordance with 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR

263, 40 CFR 264, and 40 CFR 265. Comply with land disposal restriction notification requirements as required by 40 CFR 268.

- c. All material, whether hazardous or non-hazardous shall be disposed in accordance with laws and provisions and Federal, State, or local regulations. Ensure waste is properly characterized. The result of each waste characterization (TCLP for RCRA materials) will dictate disposal requirements.

3.2.5 Disposal Documentation

Submit written evidence that the hazardous waste treatment, storage, or disposal facility (TSD) is approved for lead disposal by the EPA and State or local regulatory agencies. Submit one copy of the completed manifest, signed and dated by the initial transporter in accordance with 40 CFR 262.

3.2.6 Payment for Hazardous Waste

Payment for disposal of hazardous waste will not be made until a signed copy of the manifest from the treatment or disposal facility certifying the amount of lead-containing materials delivered is returned and a copy is furnished to the Authorities.

-- End of Section --