

**SECTION 01800 - LEAD BASED PAINT REMOVAL
CONSTRUCTION STANDARD**

PART 1: GENERAL

1.01 Scope of Standard

The following standards are required by The University of Texas at Austin for all lead based paint activities if a lead survey indicates lead levels above action levels found in 40 CFR 745 for lead based paint on surfaces, or in dust or soil, and a decision is made to abate or remove the lead based paint.

1.02 Contractor Experience:

The apparent successful bidder or their subcontractor(s) shall demonstrate prior experience on lead abatement projects of similar nature and scope through the submission of letters of reference from building owners, including the name, address, and telephone number of a contact person (someone specifically familiar with the contractor's work) for at least three (3) other previous employers of service. Include descriptions of projects, locations, and records of all air monitoring data that were generated during any of the projects whether any work was done for a child occupied facility or target housing. The 3 previous employers shall be 3 separate jobs of similar size and complexity to the job outlined in these specifications, and must have occurred within the last two years. These references shall be submitted by the apparent successful bidder within 3 days of the bid opening and shall be approved prior to making the recommendation to award the contract.

1.03 Bidders or Their Subcontractors Shall Submit:

- A. A record of any citations issued by Federal, State, or local regulatory agencies relating to lead abatement activity. Include projects, dates, and resolutions.
- B. The Contractor is required to supply a liability insurance certificate with the statement of coverage for "lead abatement contractor". Occurrence type insurance is required. Claims-made insurance is not acceptable. Insurance "certificates" shall be submitted by the apparent successful bidder in conjunction with other insurance certificates required during the contract execution process. The bidder shall provide proof of this coverage to the owner within 3 days of "bid opening", prior to the recommendation to award the contract. Minimum coverage shall be at least \$1,000,000 per occurrence.

1.04 Applicable Standards and Guidelines:

- A. It shall be the duty and responsibility of the Contractor and all of its subcontractors to be familiar and comply with all requirements of Public Law 91-596, 29 U.S.C. Secs. 651 et seq., the Occupational Safety and Health Act of 1970, (OSHA) and all amendments thereto, and to enforce and comply with all of the provisions of this Act.

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- B. All work shall be done in strict accordance with all applicable Federal, State, and Local regulations, standards, and codes governing lead abatement and hazardous or otherwise regulated waste. The most recent edition of a relevant regulation, standard, or code shall be in effect. Where there exists conflict between the regulations, standards, codes, or these specifications, the most stringent requirements shall be utilized.

1.05 Submittals and Notices:

- A. Prior to commencement of work, the Contractor shall provide to the project manager the following information at or prior to the Pre-Construction conference:
1. Submit documentation satisfactory to the Owner, Environmental Health & Safety (EH&S), Consultant & Project Manager that the Contractor's employees, including foremen, supervisors and any other company personnel or agents who may be exposed to airborne lead or who may be responsible for any aspects of abatement activities, have received adequate training in compliance with the state of Texas;
 2. Submit documentation to the Owner, EH&S, Consultant, & Project Manager from a physician that all personnel who may be required to wear a respirator are medically monitored to determine whether they are physically capable of working while wearing the required respiratory protection without suffering adverse health effects. In addition, document that personnel have received medical monitoring as is required in compliance with applicable rules and regulations listed in Section 3 above;
 3. Submit to the Owner, EH&S, Consultant, & Project Manager, NIOSH approvals for all respiratory protective devices utilized on site. Include manufacturer's certification of HEPA filtration capabilities for all cartridges and filters;
 4. Submit to the Owner, EH&S, Consultant, & Project Manager, documentation of respirator fit testing for all Contractor employees and agents who must enter the work area. This fit testing shall be in accordance with qualitative procedures as detailed in the OSHA Standard 29 CFR 1910.134. Optionally, the fit testing may be quantitative in nature;
 5. Submit to the Owner, EH&S, Consultant, & Project Manager, manufacturer's certification that HEPA vacuums, pressure differential ventilation units and other local exhaust ventilation conform to ANSI Z9.2-79; and,
 6. Submit Engineering Controls on chemical and mechanical removal to Design Manager for approval by EH&S.

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7. The contractor/employer will submit for approval by the EH&S two (2) copies of the standard operating procedures to be used for the lead abatement.
8. Submit documentation satisfactory to EH&S describing the quantity of waste to be generated over the duration of the project, the location to be provided on University property for storage of waste for the duration of the project.

B. During Abatement Activities, the Contractor shall:

1. Submit daily job progress reports to the Owner, EH&S, Consultant, & Project Manager detailing abatement activities. Include review of progress with respect to previously established milestones and schedules, major problems and action taken, injury reports, and equipment breakdown;
2. Submit daily to the Owner, EH&S, Consultant, & Project Manager, copies of work site entry logbooks with information on worker and visitor access; and,
3. Post immediately outside of the clean room area of the decontamination enclosure a list containing the names, addresses and telephone numbers of the Contractor, Owner, EH&S, the Consultant/Project Manager, the Testing Laboratory, Emergency Services and any other personnel who may be required to assist during abatement activities.
4. Shall segregate waste generated from abatement and clean up activities.
5. Notify EH&S every day that an abatement waste container is filled.
6. Follow the requirements of the EH&S document entitled "University Construction Site Procedures for Contractors".

1.06 Required Air Samples:

A. Abatement Air Monitoring:

1. Ambient air monitoring will be the responsibility of the Owner & EH&S under separate contract funded through this project.
2. The Contractor will be responsible for air monitoring as required to meet OSHA requirements for 8 hour Permissible Exposure Limits. The Contractor will submit the name of the Proposed 3rd. party air monitoring/testing laboratory at the Pre-Construction Conference. OSHA required personal air sampling shall be conducted on 25% of workers per

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containment per day by the Contractor. All testing data will be reviewed by the Owner before a final acceptance of the completed project.

1.07 Authority to Stop Work:

- A. The Owner/Project Manager has the authority to stop the abatement work at any time EH&S determines that conditions are not within these specifications. The stoppage of work shall continue until conditions have been corrected and corrective steps have been taken to the satisfaction of the EH&S. Stand-by time and expenses required to resolve violations of these specifications or applicable laws shall be at the Contractor's sole expense.
- B. The EH&S has the authority to stop the abatement work at any time that conditions are not within applicable laws or regulations. The stoppage of work shall continue until conditions have been corrected and corrective steps have been taken to the satisfaction of the EH&S. Stand-by time and expenses required to resolve violations of these specifications or applicable laws shall be at the Contractor's sole expense.

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PART 2: MATERIALS AND EQUIPMENT

2.01 Respiratory Protection:

The contractor/employer will provide respiratory protection against airborne concentrations of lead and chemicals used to remove lead. A respiratory protection program will be in place in compliance with 29 CFR 1910.134.

2.02 Protective Clothing:

The contractor/ employer shall provide at no cost to the employee and assure that the employee uses appropriate disposable work clothing (such as Tyvek) and equipment that prevents contamination of the employee and the employee's garments.

PART 3: METHODS OF COMPLIANCE

3.01 Engineering and Work Practice Controls:

The contractor/employer shall implement engineering and work practice controls, including administrative controls, to reduce and maintain employee exposure to lead to or below the Permissible Exposure Limit (50 µg/m³ of air) and to reduce chemical exposure and to reduce chemical exposure according to the chemicals MSDS to the extent that such controls are feasible. Wherever all feasible engineering and work practices controls that can be instituted are not sufficient to reduce employee exposure to or below the permissible exposure limits, the employer shall supplement them by the use of appropriate respiratory protection. Engineering and work practices shall be reviewed and approved by the EH&S. This information will be submitted as required in Part 4, Section 1 below.

3.02 Signs:

A. The contractor/employer may use signs required by other statutes, regulations or ordinances in addition to, or in combination with, signs required by this specification. The contractor/employer shall assure that no statement appears on or near any sign required by this specification that contradicts or detracts from the meaning of the required sign.

B. The contractor/employer shall post the following warning signs in each work area where an employees exposure to lead is above the PEL:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

C. Outside the work area and the secured waste storage area the warning signs will read as follows:

CAUTION

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LEAD HAZARD
DO NOT ENTER WORK AREA UNLESS AUTHORIZED

- D. The contractor/employer shall assure that signs required by this paragraph are illuminated and cleaned as necessary so that the legend is readily visible.

PART 4: ABATEMENT AND DISPOSAL OF THE LEAD-BASED PAINT HAZARD

4.01 Selection of Abatement Procedures:

- A. The three general strategies for lead based paint abatement are: Replacement, Encapsulation, and Paint Removal.
- B. Replacement means replacing building components (i.e., windows, doors, and trim) either with new components free of lead-containing paint or with the same components after the paint has been removed off-site. Replacement is a permanent solution.
- C. Encapsulation/enclosure means making lead-based paint inaccessible either by applying a material that bonds to the surface, such as acrylic or epoxy coating, or by enclosing it using systems such as gypsum wallboard, or plywood paneling.
- D. Many on-site removal methods are hazardous and have the potential for contamination by lead off-site. Some of these are chemical strippers, heat guns, sanding, scraping and mechanical methods.
- E. The contractor/employer will submit for approval by the EH&S, the standard operating procedures to be used for the lead removal.

4.02 Occupants of an Abated Unit:

- A. In the case of an abatement exclusively on the exterior of a building, occupants may not need to be relocated if the interior environment can be adequately sealed to assure that no lead dust enters the interior and safe entrance and egress can be assured.
- B. Whenever units and or common areas within an occupied building are being abated, the Project Manager will notify all residents within the building at least three working days prior to the start-up date. The notice should consist of the following: 1. Start-up date; 2. Areas to be abated; 3. A warning to heed caution signs.
- C. Specific procedures for site preparation, containment, and waste disposal will vary according to the methods of abatement employed.

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4.03 Site Preparation:

- A. Site preparation prior to abatement consists of the following steps:
1. Posting warning signs at entrances and exits to work area and secured waste storage area (Part 3, Section 2).
 2. Removing or protecting all furnishings; and,
 3. Initiating containment procedures to protect surfaces and contain and control lead dust and debris.

4.04 Containment:

- A. The following materials will be needed for containment if containment is required:
1. Polyethylene (plastic) sheets at least 6 mil thick;
 2. Heavy duty tape (e.g., duct tape) to fasten plastic sheets; and,
 3. Staple gun with heavy duty staples for fastening plastic sheets.
 4. Spray adhesive to adhere one surface to another.

4.05 Exterior Procedures:

- A. Uncontained water blasting and open abrasive blasting open air grinding are unacceptable methods of abatement.
- B. Soil contaminated with lead as a direct result of proper or improper abatement will be removed into containers of the type specified in Section 4.07 below. Analytical testing for waste determination will be performed by EH&S. Disposal will be done by EH&S. Contractor will reimburse EH&S for costs of testing and disposal.
- C. Lead dust and debris dispersed to the interior environment of adjacent units as a direct result of proper or improper abatement will be removed into containers of the type specified in 4.07 below. Analytical testing for waste determination will be performed by EH&S. Disposal will be done by EH&S. Contractor/Employer will reimburse EH&S for costs of testing and disposal.
- D. Before beginning to abate lead paint in an exterior work area, a contractor shall use the following procedures depending on the method of abatement employed:
1. For Liquid Waste:

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- a. Place polyethylene plastic sheeting (6 mil) as close to the building foundation as possible;
- b. Extend the edge of the sheets a sufficient distance to contain the runoff and raise the outside edge of the sheets (e.g., with two by fours) to trap liquid waste.
- c. Have available appropriate containers to hold liquid waste for later transfer and disposal;
- d. Where seams occur, they must be sealed with tape and spray adhesive edges must be raised (e.g., with two by four framing) and a new section of plastic sheeting and framing shall be added as needed; and,
- e. Liquid waste can be pumped, vacuumed or bailed for transfer to disposal container.

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2. For Dry Waste :

- a. Place polyethylene plastic sheeting (6 mil) as close to the building foundation as possible;
- b. Extend the sheeting out from the foundation a distance of 3 feet per story being abated with a minimum of 5 feet and a maximum of 20 feet. (It may not be possible to extend sheeting beyond the edge of the nearest sidewalk);
- c. Weight the sheeting at the foundation and along edges and seams; and,
- d. Erect vertical shrouds where directed by the Owner, at locations susceptible to gusty wind conditions that could cause migration of contaminated material outside of the immediate work area.

4.06 Residential Lead Based Paint Waste Storage and Disposal:

- A. Contractors managing lead based paint (LBP) waste from residential dwellings (other than building demolition) must minimize the generation of lead dust, limit access to stored LBP wastes including debris, and maintain the integrity of waste packaging material during transfer of LBP waste. Contractors must use best management practices including:
 - Collect paint chips and dust, and dirt and rubble in plastic trash bags for disposal
 - Store larger LBP architectural debris pieces in containers until ready for disposal
 - Consider use of a covered mobile dumpster (e.g. a roll-off container) for storage of LBP debris until job is done

LBP waste from residential dwellings must be disposed of in a municipal solid waste landfill or a municipal solid waste combustor. Dumping and open burning of LBP waste is not allowed. LBP waste from residential dwellings must be disposed of in compliance with regulations of the Texas Natural Resources Conservation Commission. Sludges or mixtures of LBP waste from residential dwellings, e.g. mixtures with chemical paint strippers, may have to be disposed of in accordance with the following specifications regarding potentially hazardous waste. The Contractor and Project Manager must obtain the approval of EH&S prior to generating waste streams with chemical components even if the abatement is for residential dwellings.

4.07 Storage of Liquid and Solid Waste (other than residential dwelling):

- A. The contractor/employer will make provisions for the safe storage of waste on-site prior to disposal. For security reasons, waste storage areas must be treated

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as abatement areas and access restricted either by erection of temporary, locked, chain link fence if not secured, fenced area is already available on site for outdoor storage. If the abatement is in an interior space the waste may be stored in a secured room. When removal by EH&S will be required, contractor will notify the appropriate EH&S contact one working day in advance of the working day when removal will be needed. If the waste is stored in the interior of a building and above ground level, the contractor will move container to ground floor, if applicable, at a time agreed upon in advance with EH&S Hazardous Waste Section. All storage areas must be maintained and must be accessible for at least one month following the abatement project or alternative areas on contiguous University property must be provided and at least 10 working days (i.e. normal University Staff work days, not contract work days) notice by Contractor and Project Manager of the need for EH&S to move abatement waste containers to alternate areas. All waste storage areas must be accessible to EH&S at all times.

- B. Storage containers must have the appropriate hazard labels as provided by EH&S when necessary. Small quantities of solid waste can be collected and bagged in 6-mil plastic bags and stored in a designated secure storage area. Otherwise, all abatement waste will be stored in either open top DOT approved drums (17H) or UN (1A2/Y1.5/150) drums provided at the contractor's expense or roll-offs furnished at The University's expense. Roll-offs will be provided if EH&S agrees with Project Manager and Contractor that over 30 cubic yards of contaminated abatement material will be generated and if Project Manager and Contractor give EH&S at least five working days (i.e. normal University staff work days, not contract work days) notice and provide an accessible and secured area as specified above.
- C. Waste will be segregated into lead paint chips and dust, plastic sheeting, stripping solvents, stripping sludge, wash waters, disposable clothes and respirator filters, and any other appropriate categories as specified by EH&S, and containers will be marked as to the category of waste.
- D. If accidental mixing of hazardous and non-hazardous waste occurs, the contractor will be responsible to The University for the increase in cost of disposal. The contractor will not leave waste by roadside or near an unauthorized dumpster or release lead-contaminated wash water to the storm drain or sanitary sewer.

4.08 Waste Disposal (other than residential dwelling):

- A. EH&S will have any necessary testing performed at University expense and according to University waste management procedures. Testing will be performed after contractor has properly segregated wastes as noted in Section 4.07(c) above. EH&S will dispose of waste that it determines to be hazardous lead abatement waste at The University's expense.

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- B. Examples of waste that may be disposed of at University's expense include paint chips scraped off of substrate, paint and immediately underlying plaster removed by grinding, rags contaminated with lead paint and chemical stripper, contaminated personal protective equipment, and containment material such as contaminated plastic sheeting used as ground cover.
- C. Contractor will dispose of waste that EH&S determines to be other than hazardous lead abatement waste at Contractor's expense.
- D. Examples of waste that may be disposed of at the Contractor's expense would include, but not be limited to, normal municipal trash generated by the contractor and building materials removed unnecessarily, i.e. that did not contain lead above the action level or had no lead material above the action level directly adhering to their surface. In all cases the minimum technically feasible amount of non-contaminated material will be removed for disposal. Amounts determined to be in excess of that required will be disposed of by The University, but paid for by the contractor. Waste manifests for all Class 1 and Hazardous waste will be prepared by and signed by EH&S.

PART 5: CLEANUP

5.01 Daily cleanup:

The daily cleanup activity will be scheduled for the same time at the end of each workday after active abatement has ceased and sufficient time must be allowed for a thorough and complete cleanup. Under no circumstances will active abatement be proceeding while the daily cleanup is in progress.

5.02 Beginning Final Cleanup:

The final cleanup process will be scheduled to start no sooner than 24 hours after active abatement has ceased.

5.03 Testing:

The scheduling of final testing will be coordinated with final cleanup activities to ensure that the testing results provide valid final cleanliness level.

5.04 Waste Disposal:

Regulations governing hazardous waste storage, transportation and disposal affect both the daily and final cleanup procedures. The abatement contractor must select storage areas and request waste pickups as approved by EH&S.

5.05 Preliminary Visual Inspection:

After the preliminary final cleanup effort is completed, an inspector from the Owner, EH&S, Physical Plant, and from an outside consultant/contractor if applicable, shall visually inspect the entire affected area to ensure that all surfaces requiring abatement have been addressed and all visible dust and debris and residue have been removed.

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5.06 Final Cleanup:

After painting/sealing is complete, the final cleanup can take place.

5.07 Final Inspection:

- A. The inspector from the Owner, EH&S, Physical Plant, and from an outside consultant/contractor if applicable, will confirm job completeness by determining whether all surfaces have been abated according to the approved abatement plan. The inspector must make sure that all abated surfaces and all floors have been repainted or otherwise sealed.
- B. Number and location of surface wipe samples will be determined before the startup of abatement.

END OF STANDARD 01800