



LEAD PAINT, CONSTRUCTION AND BUILDING COMPONENT REMEDIATION PROJECT SPECIFICATIONS

Buildings A thru C, Portables 22 thru 33, and
RR2
Oak Elementary School
633 South Oak Street
Inglewood, California

Prepared for:

Inglewood Unified School District c/o Cordoba Corporation
Bond Management Team
401 South Inglewood Avenue
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Project No.: INGL-19-8236

Date: January 30, 2019

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1 SCOPE OF WORK

The primary and general intent of this project is the stabilization and removal of lead-coated components including ceramic tile in areas impacted by the upcoming renovation project. By submitting a bid, the Contractor warrants its intent to conduct said work properly by using qualified personnel employed by licensed contractors.

Painted surfaces containing lead will remain upon the completion of abatement activities. All contractor's and sub contractor's employees that will come in contact with any of the building surfaces or components containing lead, in any quantity, will have, at a minimum, lead awareness training and be medically qualified to wear a respirator in order to comply with Cal OSHA Title 8 CCR, Section 1532.1.

2 CONTRACTOR QUALIFICATIONS

The Contractor must submit copies of all state and local licenses and permits necessary to carry out the abatement scope of work as outlined in this document.

3 NOTIFICATION REQUIREMENTS

The Contractor will make the required Cal/OSHA and, if necessary, the California Department of Public Health (CDPH) notifications pertinent to the work related to lead-based paint and lead containing paint.

4 PROJECT SUBMITTALS

4.1 Prior to Commencement of Work

The Contractor shall provide the following submittals to Owner's Representative five days prior to the pre-start meeting, unless specified otherwise in this Section or by Owner or their representative.

- The Contractor shall submit documentation satisfactory to Owner's Representative that the Contractor's employees, including foremen, supervisors, or other personnel who may be responsible for any aspects of abatement or interim control activities, have received training and certification mandated by Title 17, CCR, Division 1, Chapter 8.
- The Contractor shall submit documentation from a physician that all employees or agents who may be exposed to airborne lead dust have been medically monitored to determine whether they are physically

capable of working while wearing the respirator required without suffering adverse health effects. In addition, the Contractor shall document that his lead abatement personnel have received medical surveillance as required in Title 8 Section 1532.1. The documentation shall be in the form of a Physician's Written Opinion.

- The Contractor shall submit certification for all HEPA Vacuums, ventilation units, and other local exhaust ventilation equipment.
- The Contractor shall submit results of biological monitoring of all workers sampled before and after the remediation project for blood lead and ZPP level.
- Whenever rental equipment is to be used in abatement areas, or to handle or transport Asbestos-Containing Waste Material, the Contractor shall submit to the rental agency a written notification concerning the intended use of the rental equipment. A copy of this written notification shall be submitted to the Owner's Representative.
- The Contractor shall document NIOSH approvals for all respiratory protective devices used on site. The Contractor shall include manufacturer certification of HEPA filtration capabilities for all cartridges and filters.
- The Contractor shall submit to the Owner's Representative a written Injury and Illness Prevention Program meeting the requirements of CCR Title 8, Section 3203.
- The Contractor shall submit to Owner's Representative a written respiratory protection program meeting the requirements of 29 CFR 1910.134 (b) (d) (e) and (f), documentation that all employees using respirators having received the training as required, and documentation of respirator fit-testing for all Contractor employees and agents who must enter the Work Area wearing negative pressure respirators.
- The Contractor shall submit an emergency evacuation plan for Owner's Representative's approval prior to the commencement of work. This plan shall include consideration of containment failure, fire, explosion, toxic atmospheres, electrical hazards, slips, trips and falls, confined spaces and heat related injury.
- The Contractor shall verify that an EPA generator number has been obtained for the lead based paint waste generated from the remediation project.
- The Contractor shall submit names, address, contact person, and phone number for proposed licensed waste hauler and proposed landfill.
- The Contractor shall submit a detailed job-specific plan of the work procedures to be used in the abatement or interim control of LBP. The plan shall include a sketch showing the location, size, and details of the regulated areas, location of decontamination chambers, change rooms, shower facilities, and mechanical ventilation system. 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 10 micrograms per cubic meter of air are not exceeded outside of the regulated area. Include air sampling, training and strategy, sampling methodology, frequency, duration of sampling, and qualifications of air monitoring personnel in the air-sampling portion of the plan.
- The Contractor shall submit to the Owner a copy of all notifications sent to the pertinent governing agencies.
- The contractor shall develop and submit for review by the Consultant a waste management plan. The plan shall include a detailed summary of waste profiling and characterization activities in order to achieve compliance with applicable regulations

4.2 Submittals During Remedial Activities

Submittals described in this section may, at Owner or their representative's discretion, be provided to Owner's Representative rather than directly to Owner. The Contractor shall submit the following items on a daily or weekly basis as directed by Owner or their representative:

- Daily job progress reports detailing remediation, transportation, and disposal activities.
- Daily copies of work site entry logbooks with information on worker and visitor access.
- Daily logs documenting filter changes on respirators, HEPA vacuums, ventilation units, and other engineering controls.
- Results of any material tests conducted during the project, for use during the remedial activities.
- Copies of California Uniform Hazardous Waste Manifest forms for all lead based paint Waste Material removed from the remediation site and transported to the disposal site.
- Daily personal monitoring results, within 48 hours of sample collection.

In addition, the following documentation must be maintained:

- Meetings
- Visitations
- Work area entry log
- Accidents
- Special or unusual events, i.e. Barrier breaching, equipment failure
- Inspection of work area preparation prior to start of remediation work and daily thereafter
- Removal of any sheet plastic barriers
- Removal of waste materials from work area
- List of subcontractors at the site
- Number of personnel at the site
- Stoppages, delays, shortages, losses
- Meter readings and similar recordings
- Emergency procedures
- Orders and request of governing authorities
- Final inspection

4.3 Entry Log for Work Area

Contractor is responsible for enforcing the timely and correct log entries in the "Daily Sign-in/Sign-out & Visitors log". This form must be available at all times in the clean room of each work area.

4.4 Special Reports

General: Except as otherwise indicated, submit special reports directly to Owner within one (1) day of occurrence requiring special report, with copy to Owner's Representatives and others affected by occurrence.

Reporting Unusual Events: When an event of unusual and significant nature occurs at site, within twenty-four (24) hours prepare and submit a written special report to Owner's Representative listing chain of events, person participating, response by Contractor's personnel, evaluation of results or effect, and similar pertinent information. When such events are known or predictable in advance, advise Owner in advance at earliest possible date.

Reporting Accidents: Prepare and submit written reports of significant accidents, at site and anywhere else work is in progress. Reports must be submitted to Owner's Representative within twenty-four (24) hours after the accident occurs. Record and document data and actions; comply with industry standards. For this purpose, a significant accident is defined to include events where personal injury is sustained, or property loss of substance is sustained, where event posed a significant threat of loss or personal injury, or where an OSHA 200 Log is required. A copy of an OSHA 200 Log may be submitted for this purpose.

Report Discovered Conditions: When an unusual condition of the building is discovered during the work (e.g. leaks, corrosion) prepare and submit a written special report to Owner's Representative indicating condition discovered.

5 WORKER CERTIFICATIONS

5.1 Training Requirements

All workers are to be trained as required by *Cal/OSHA Title 8, 1532.1* and certified by *CDPH Title 17, California Code of Regulations (CCR)*.

5.2 Medical Examinations

The Contractor shall conduct medical monitoring as required by *Cal/OSHA Title 8, 1532.1* and require its employees to be further evaluated by a physician to determine their capability to

- Work safely while breathing through the added resistance of a respirator;
- Carry the extra weight of a respirator; and
- Physiological ability to wear a respirator.

The documentation shall include the physician's written opinion whether the worker has any detected medical conditions that would place the worker at an increased risk of material health impairment from exposure to lead, any recommended limitations on the worker, or on the use of personal protective equipment such as respirators.

5.3 Respirator Training/Fit Testing

The Contractor must provide current proof of worker annual training in the selection, fitting, limitations, and care and maintenance of respirators. Documentation will include the name of the worker, fit testing procedures used, testing agent used, manufacturer of respirator, type of respirator (half face/full face), date of testing and training, and name of the instructor/tester.

5.4 Hazard Communication

For each worker, the Contractor shall secure a Worker Acknowledgment that indicates the worker was provided training and information regarding hazardous substances in accordance with *CCR Title 8, Section 5194, Hazard Communication*.

6 WORKER RESPIRATORY PROTECTION DURING ABATEMENT

6.1 Regulatory Compliance

The abatement project will be conducted using respiratory protection in accordance with federal and state regulatory requirements.

6.2 Personal Exposure Monitoring

The Contractor shall conduct the required worker exposure monitoring as required by *Occupational Safety and Health Administration (OSHA), Title 8, Section 1532.1* and *29 CFR 1910.62*.

Cal/OSHA Lead in Construction Standard Title 8 1532.1 (d) (3) (D) requires employers to implement worker protective measures including training, medical surveillance, and respiratory protection when conducting any one of the “lead-related tasks.” The employer must assume that the worker is exposed to airborne lead concentrations above the permissible exposure level until the negative exposure assessment shows otherwise. Results shall be made available to the Client’s Representative and Consultant upon request.

Class 1 Tasks: The Remediation Contractor shall assume exposure of at least 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to $500 \mu\text{g}/\text{m}^3$ until exposure assessment proves otherwise for the tasks that include, but are not limited to, the following:

- Manual demolition of structures with lead paint or coating
- Manual scraping of lead paint or coating
- Manual sanding of lead paint or coating
- Heat gun ($<1100^\circ\text{F}$) application on lead paint or coating
- Power tool lead paint or coating removal with HEPA dust collection systems
- Spray painting with LBP
- Any other activity where an employee may be exposed to lead above the permissible exposure limit.

Class 2 Tasks: The Remediation Contractor shall assume exposure of at least $500 \mu\text{g}/\text{m}^3$ to $2500 \mu\text{g}/\text{m}^3$ until exposure monitoring proves otherwise for the tasks that include, but are not limited to, the following:

- Using lead-containing mortar
- Burning of lead paint or coating
- Rivet bursting on lead paint or coating
- Power tool lead paint or coating removal without HEPA dust collection systems
- Cleanup activities of lead paint or coating where dry expendable abrasives are used
- Abrasive blasting enclosures movement and removal

Class 3 Tasks: The Remediation Contractor shall assume exposure of at least 2500 µg/m³ until exposure assessment proves otherwise for the tasks that include, but are not limited to, the following:

- Abrasive blasting of lead paint or coating
- Cutting where lead paint or coating are present
- Welding where lead paint or coating are present
- Torch burning where lead paint or coating are present

6.3 Minimum Respiratory Protection Requirements

The Contractor shall supply to its workers NIOSH-approved, negative-pressure respirators equipped with P100 HEPA particulate filters (HEPA).

Airborne Concentration of Lead or Condition of Use	Required Respirator
Not in excess of 500 µg/m ³	<p>½ mask air purifying respirator with HEPA-P-100 filters</p> <p>½ mask supplied air respirator operated in demand (negative pressure) mode</p>
Not in excess of 1,250 µg/m ³	<p>Loose-fitting hood or helmet-powered air-purifying respirator with high-efficiency filters</p> <p>Hood or helmet-supplied air respirator operated in a continuous flow mode; e.g., type CE abrasive blasting respirators operated in a continuous flow mode</p>
Not in excess of 2,500 µg/m ³	<p>Full-face air-purifying respirator with purple high-efficiency filters (HE)</p> <p>Tight-fitting, powered air-purifying respirator with high-efficiency filters</p> <p>Full-face, supplied air respirator operated in demand mode</p> <p>½ mask or full-face, supplied air respirator operated in a continuous flow mode</p> <p>Full-face, self-contained breathing apparatus (SCBA) operated in demand mode</p>
Not in excess of 50,000 µg/m ³	<p>½ mask supplied air respirator operated in pressure demand or other positive-pressure mode</p>

Airborne Concentration of Lead or Condition of Use	Required Respirator
Not in excess of 100,000 µg/m ³	Full-face, supplied air respirator operated in pressure demand or other positive-pressure mode; e.g., type CE abrasive blasting respirator operated in a positive-pressure mode
Greater than 100,000 µg/m ³ unknown concentration, or firefighting	Full-face SCBA operated in pressure demand or other positive-pressure mode

6.4 Lead-Containing Paint

WORK ACTIVITIES RELATED TO PAINTED SURFACES WITH DETECTABLE CONCENTRATIONS OF LEAD, WHEN DISTURBED FOR CONSTRUCTION PURPOSES (INCLUDING MANUAL DEMOLITION, SANDING ETC), ARE SUBJECT TO CAL/OSHA EXPOSURE ASSESSMENT REQUIREMENTS SET FORTH IN TITLE 8 CCR, SECTION 1532.1 (D). THIS REGULATION REQUIRES INITIAL EMPLOYEE EXPOSURE MONITORING TO EVALUATE WORK EXPOSURE DURING WORK THAT DISTURBS PAINT WITH ANY DETECTABLE LEVELS OF LEAD. IF DOCUMENTED AIRBORNE LEAD LEVELS ARE ABOVE THE ESTABLISHED CAL/OSHA ACTION LIMIT (AL) OR PERMISSIBLE EXPOSURE LIMIT (PEL), ADDITIONAL MONITORING AND RESPIRATORY PROTECTION ARE REQUIRED. REFER TO ALTA ENVIRONMENTAL’S HAZARDOUS MATERIALS SURVEY AND TESTING REPORT FOR A LISTING OF PAINTS WITH DETECTABLE LEVELS OF LEAD.

Until an approved negative exposure assessment is documented, employers conducting activities impacting surfaces with detectable concentrations of lead must follow all procedures related to personal protection, work practices and exposure monitoring.

7 EMERGENCY PLANNING AND PROCEDURE

7.1 Fire-Retardant Materials

The Contractor should use only approved fire-resistant or retardant materials. Documentation shall be provided evidencing proper fire rating prior to the use of subject materials.

7.2 Contingency Plan

The Contractor will be responsible for developing an Emergency, Fire, Safety, and Evacuation Plan for the abatement project. This will include, but not be limited to, procedures to be used in the event of emergencies such as fire, medical problems, loss of power, waste removal spills, water leaks, etc., describing how they will control or limit the release of asbestos fibers and minimize the impact of the emergency on the abatement project and the building. The Contractor will provide a written plan outlining

the above, including emergency phone numbers and the route to hospital and emergency facility. The plan will be available on-site.

Disruption of fire alarm and sprinkler systems should be minimized. Any such disruption shall immediately be brought to the attention of the Owner's Representative and the Consultant. The Contractor shall also provide a fire watch to be present at all times that such disruptions exist. If work is in progress, the senior responsible Contractor's Representative (job project manager or foreman) will be responsible for the fire watch. The Contractor is responsible for compliance with applicable site and local requirements associated with the work.

8 PREVENTION OF LEAD-BASED PAINT CONTAMINATION

8.1 Work Practices

The Contractor shall assume full responsibility and liability for compliance with all applicable federal, state, and local regulations pertaining to work practices including, but not limited to, hauling, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site. The Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by the applicable federal and state regulations.

All lead-dust removal work activities shall be conducted using sound work procedures consistent with the current standard of care and state of the art practices to prevent contamination to adjacent work areas. If poor work practices are observed, the Consultant will advise the Contractor to make the necessary corrections. If appropriate corrections are not made after repeated warnings, or if an immediate threat exists for contamination could be released outside the work area, abatement work will be stopped.

8.2 Schedule of Samples during Work Activities

The contractor shall conduct required worker exposure monitoring as required by *OSHA, Title 8, Section 1532.1*. The Consultant shall conduct area air sampling inside and outside the containment work areas.

Schedule of Sampling

Location Sampled	Number of Samples	Type of Sample	Remarks
Inside/outside	2 per 8-hour work shift	Air	During LBP removal work
Inside	1 per work area	Wipe	Clearance following work activity

8.3 Stop Work Authorization

The decision to stop work shall be made jointly by the Consultant and the Owner's Representative.

Any loss or damage due to a stop work order issued to prevent lead-contamination release shall be the Contractor's responsibility.

9 SITE-SPECIFIC WORK PLAN

9.1 Materials with Lead-Based Paints/Surface Coatings

Building A

Item No.	Component	Component Location	Paint Color and Condition	Substrate	Type of Work	Spec Section
01	Window cases	Building A – interior and exterior	White/good	Wood	Full removal as noted in DSA drawings	9.2
02	Walls	Building A – boy's restroom	Beige/good	Ceramic	Full removal as noted in DSA drawings	9.2
03	Baseboards	Building A – girl's restroom	Beige/good	Ceramic	Full removal as noted in DSA drawings	9.2
04	Doors and Door cases	Building A – interior and exterior	White/blue/good	Wood	Full removal as noted in DSA drawings	9.3
05	Cabinet	Building A – interior throughout	White/good	Wood	Removal as necessary	9.2
06	Baseboard	Building A – interior throughout	White/good	Wood	Removal as necessary	9.2
07	Counter top	Building A – supply room and nurses office	Blue/white/good	Ceramic	Removal as necessary	9.2

Item No.	Component	Component Location	Paint Color and Condition	Substrate	Type of Work	Spec Section
08	Sink	Building A – supply room and nurses office	White/good	Ceramic	Full removal as noted in DSA drawings	9.2
09	Ladder	Building A – supply room	White/good	Metal	Stabilization as necessary	9.3
10	Cabinet	Building A - Throughout	White/good	Plaster	Stabilization as necessary	9.2
11	Handrail	Building A – exterior	Blue/good	Metal	Full removal as noted in DSA drawings	9.3
12	Roll door	Building A – exterior	White/good	Wood	Stabilization as necessary	9.3
13	Roll door case	Building A – exterior	White/good	Wood	Stabilization as necessary	9.3

Building B

Item No.	Component	Component Location	Substrate	Paint Color	Type of Work	Spec Section
14	Window frame	Building B – interior/exterior	White/damaged	Wood	Full removal as noted in DSA drawings	9.3
15	Handrail	Building B – exterior	Blue/good	Metal	Full removal as noted in DSA drawings	9.3

Item No.	Component	Component Location	Substrate	Paint Color	Type of Work	Spec Section
16	Door	Building B – exterior/interior perimeter exit doors	Blue/damaged	Wood	Full removal as noted in DSA drawings	9.3
17	Door case	Building B – exterior/interior perimeter exit doors	Blue/damaged	Wood	Full removal as noted in DSA drawings	9.3
18	Door case	Building B- Throughout	White/good	Wood	Full removal as noted in DSA drawings	9.3
19	Cabinet	Building B – interior throughout	White/good	Wood	Removal as necessary	9.2
20	Counter top	Building B – all classrooms	Beige/ good	Ceramic	Removal as necessary	9.2
21	Sink	Building B – all classrooms	White/good	Ceramic	Full removal as noted in DSA drawings	9.2
22	Wall	Building B – all restrooms	Beige/good	Ceramic	Removal as necessary	9.2
23	Wall	Building B – all restroom in hallway	Yellow/good	Ceramic	Removal as necessary	9.2
24	Ceiling	Walkway between buildings B/C	White/good	Wood	Stabilization as necessary	9.3
25	Post	Walkway between buildings B/C	Blue/damaged	Metal	Stabilization as necessary	9.3

Item No.	Component	Component Location	Substrate	Paint Color	Type of Work	Spec Section
26	Fascia	Walkway between buildings B/C	Blue/damaged	Wood	Stabilization as necessary	9.3
27	Gutter	Walkway between buildings B/C	Blue/good	Metal	Stabilization as necessary	9.3
28	Downspout	Walkway between buildings B/C	Blue/good	Metal	Stabilization as necessary	9.3
29	Flashing	Walkway between buildings B/C	Blue/damaged	Metal	Stabilization as necessary	9.3

Building C

Item No.	Component	Component Location	Paint Color and Condition	Substrate	Type of Work	Spec Section
30	Door	Building C – exterior/interior	Blue/good	Wood	Full removal as noted in DSA drawings	9.3
31	Door case	Building C – interior/exterior	Blue/good	Wood	Full removal as noted in DSA drawings	9.3
32	Window case	Building C – interior/exterior	Beige//white/good	Metal	Full removal as noted in DSA drawings	9.3
33	Baseboard	Building C – kitchen restrooms	Yellow/good	Ceramic	Removal as necessary	9.2

Item No.	Component	Component Location	Paint Color and Condition	Substrate	Type of Work	Spec Section
34	Fascia	Building C – exterior	Blue/damaged	Wood	Stabilization as necessary	9.3
35	Wall	Building C – boy's and girl's restrooms	Yellow/good	Ceramic	Full removal as noted in DSA drawings	9.2
36	Ceiling	Walkway between buildings B/C	White/good	Wood	Stabilization as necessary	9.3
37	Post	Walkway between buildings B/C	Blue/damaged	Metal	Stabilization as necessary	9.3
38	Fascia	Walkway between buildings B/C	Blue/damaged	Wood	Stabilization as necessary	9.3
39	Gutter	Walkway between buildings B/C	Blue/good	Metal	Stabilization as necessary	9.3
40	Downspout	Walkway between buildings B/C	Blue/good	Metal	Stabilization as necessary	9.3
41	Flashing	Walkway between buildings B/C	Blue/damaged	Metal	Stabilization as necessary	9.3

All other painted surfaces not listed above are considered to be lead-containing, at a minimum until confirmatory paint chip sampling proves otherwise.

The Contractor is responsible for assessing quantities to be impacted by this work plan.

9.2 Component Removal

Engineering controls:	Install demarcation signage, drop floors, and critical barriers as necessary. Negative air pressure shall be established for dust control as necessary. A one-stage decontamination facility with a wash station is required.
Min. PPE:	Half-face, air-purifying respirators equipped with HEPA-P100 filters. Disposable clothing (Tyvek® suits, or equivalent) and hand, foot, and eye protection are required. Provide personal monitoring and comply with Cal/OSHA requirements during work activities.
Removal:	No power equipment without a local exhaust HEPA filter capture. Remove components using manual means and wet methods. For mechanical removal inside the building, a containment work area with negative-pressure differential shall be erected.
Preparation/transport:	Bag all loose debris immediately and separate the waste into waste streams. Conduct the required waste profile sampling for disposal.
Disposal:	Dispose of all waste in accordance with federal, state, and local regulations.

9.3 Paint Stabilization

Engineering controls:	Install demarcation signage, drop floors, and critical barriers as necessary and a wash station.
Min. PPE:	Half-face, air-purifying respirators equipped with HEPA-P100 filters. Disposable clothing (Tyvek® suits, or equivalent) and hand, foot, and eye protection are required. Provide personal monitoring and comply with Cal/OSHA requirements during work activities.
Removal:	Wet the work area surfaces and remove all damaged loose and flaky paint. Apply a temporary paint sealer (primer) to all the affected surfaces. Work performed under this task shall be completed using manual means. Mechanical equipment shall be used only in conjunction with vacuums that are equipped with HEPA filters.
Preparation/transport:	Package the waste immediately and separate the waste into waste streams. Conduct the required waste characterization for disposal (refer to Section 10 of this document).

Disposal: Dispose of all waste in accordance with federal, state, and local regulations.

10 FINAL VISUAL INSPECTION AND CLEARANCE SAMPLING

10.1 Visual Inspection

A Certified Lead Project Monitor or Inspector/Assessor will conduct a comprehensive visual inspection. Ladders, scaffolding, and lifts must be made available to provide access to all surfaces in the area. Access shall allow touching of all surfaces. If any debris, residue, dust, or other matter is found, repeat final cleaning and continue decontamination procedure until the area is visually clean and no debris, residue, dust, or other material is found.

10.2 Clearance Sampling Protocol

Following the comprehensive visual inspection, the Certified Lead Project Monitor or Inspector/Assessor will collect wipe clearance samples in accordance with procedures described in the U.S. Department of Housing and Development *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*, Chapter 15: Clearance.

The following clearance criterion has been adopted for this project:

- Interior floors: 40 micrograms per square foot

11 DISPOSAL OF WASTE

Waste materials shall be segregated into separate waste streams (e.g., demolition debris, personal protective equipment, plastic, etc.) and placed into labeled leak-tight containers. Waste water from the washing facilities will be captured and properly filtered prior to disposal.

The contractor shall develop and submit for review by the Consultant and Owners Representative a waste management plan. The plan shall include a detailed summary of waste profiling and characterization activities in order to achieve compliance with applicable regulations. Further, the Contractor shall provide documentation from the proposed treatment, storage and disposal facility evidencing acceptability of each identified waste stream. Profiles sampling shall be the responsibility of the Contractor. The Consultant will be present during waste profile sampling.

All wastes shall be disposed of in accordance with applicable federal, state, and local regulations.

12 PATENT PROTECTION

The Contractor has the sole responsibility for determining whether patents are applicable to any equipment, methods, or procedures used on this project and to meet any requirements of the patent owner. The Contractor will be responsible for any fees associated with the use of such patents.

13 DEFINITIONS

Definitions contained in this section are not necessarily complete but are general to the extent that they are not defined more explicitly elsewhere in the contract documents. However, no implied meaning shall be interpreted to extend the Owner's Representative's responsibility into the Contractor's area of construction supervision.

Abatement:	The permanent (defined as designed to last at least 20 years or, in the case of encapsulation, a 20-year product warranty) elimination of LBP hazards through replacement, enclosure, encapsulation, paint removal, and cleaning to remove lead-contaminated dust.
Accredited Laboratory:	A laboratory recognized under the EPA National Lead Laboratory Accreditation Program (NLLAP).
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 eight-hour period in an occupational/industrial environment.
Accessible Surface:	Any interior or exterior surface such as sills and protruding surfaces that a young child can mouth or chew (HUD).
Airlock:	A system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area.
Air Monitoring:	Sampling of lead concentrations within the lead control area and inside the physical boundaries that is representative of airborne lead concentrations which may reach the breathing zone of personnel potentially exposed to lead.
Air Monitoring Professional:	The professional contracted or employed by the Remediation Contractor to supervise and/or conduct personal air monitoring and analysis.
Authorized Visitor:	Any designated representatives of the Owner or their representative, and/or a representative of a regulatory or other agency having jurisdiction over the project, and/or any person authorized in writing by the Owner or their Representative as a visitor.
Bare Soil:	Soil not covered with grass, sod, or similar vegetation. Bare soil includes sand (for example, soil in sandboxes).

Base Substrate:	The building material beneath the LBP film.
Biological Monitoring:	The analysis of blood, urine, or both to determine the level of lead contamination in the body. Blood lead levels are expressed in micrograms of lead per tenth of a liter of blood (deciliter), or µg/dL.
Breathing Zone:	A hemisphere forward of the shoulders with a radius of approximately 6 to 9 inches around the nose and mouth of the face.
Building Component:	Any part of building coated with paint.
CDPH:	California Department of Public Health
Certified Industrial Hygienist (CIH):	An industrial hygienist holding a current certification in comprehensive practice from the American Board of Industrial Hygiene.
Clean Room:	An uncontaminated area or room that is a part of the Worker Decontamination Enclosure System with provisions for storage of workers' street clothes and clean protective equipment.
Cleaning:	The process of using a HEPA vacuum and wet cleaning agents to remove leaded dust. The process includes the removal of bulk debris from the work area. OSHA prohibits the use of compressed air to blow lead-contaminated dust off a surface.
Clearance Inspection:	An on-site limited investigation that includes visual examination and collection of environmental samples as described in <i>Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing</i> , U.S. Department of Housing and Urban Development, June 1995, Chapter 15, "Clearance," Sections II–VI.
Competent Person:	As defined in <i>OSHA Lead Construction Standard (29 CFR 1926.62)</i> , a person who is capable of identifying or predicting hazardous working conditions and work areas and who has authorization to take prompt, corrective measures to eliminate the hazards. A competent person is not necessarily a risk assessor, inspector technician, or abatement project supervisor.
Component Removal:	The removal of doors, windows, trims, and other building items with LBP.

Containment:	A system, process or barrier used to contain lead hazards inside a work area as described in <i>Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing</i> , U.S. Department of Housing and Urban Development, June 1995, Chapter 8, "Containment and Barrier Systems."
Containment Work Area:	Work area that has been sealed, plasticized, and equipped with both Worker Decontamination and Waste and Equipment Decontamination/Pass-Out Enclosure Systems.
Curtained Doorway:	A device to allow ingress or egress from one room to another while permitting minimal one-way air movement.
Demolition:	The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations.
Deteriorated Lead-Based Paint:	Interior or exterior LBP that is peeling, chipping, blistering, flaking, worn, chalking, alligating, cracking, or otherwise becoming separated from the substrate, or LBP on a damaged or deteriorated surface or fixture.
Encapsulation:	Any covering or coating that acts as a barrier between the LBP and the environment and that relies on adhesion and the integrity of the existing bonds between paint layers and between the paint and the substrate for its durability.
Enclosure:	The use of rigid, durable construction materials that are mechanically fastened to the substrate in order to act as a barrier between the LBP and the environment.
Equipment Room:	A contaminated area or room that is part of the Worker Decontamination Enclosure System with provisions for storage of contaminated clothing and equipment; also referred to as the dirty room.
Exposure Monitoring:	The personal air monitoring of an employee's breathing zone to determine the amount of contaminant (e.g., lead) to which he/she is exposed.
Facility:	Any institution, commercial or industrial structure, installation, or building.

Fixed Object:	A piece of equipment or furniture in the work area that cannot be removed from the work area, or has been specified to remain in the work area during abatement.
Friction Surface:	Any interior or exterior surface, such as windows or stair treads, that is subject to abrasion or friction.
Generator:	Any person, by site, whose act or operation produces hazardous waste identified or listed in <i>40 CFR Part 261</i> , or whose act causes a hazardous waste to come under regulation (<i>40 CFR 260.10</i>).
Generator Identification Number:	The unique number assigned by the EPA to each generator or transporter of hazardous waste and each treatment, storage, or disposal facility.
Hazardous Waste:	As defined in EPA Regulations (<i>40 CFR 261.3</i>), the term “hazardous waste” means solid waste or a combination of solid wastes that, because of its quantity, concentration, physical, chemical, or infectious characteristics, may cause or significantly contribute to increases in mortality, or serious and irreversible, or incapacitating but reversible illnesses, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed. As defined in the regulations, solid waste is hazardous if it meets one of four conditions: (1) exhibits a characteristic of hazardous waste (<i>40 CFR Section 261.20 through 262.24</i>), (2) has been listed as hazardous (<i>40 CFR Section 261.31 through 261.33</i>), (3) is a mixture containing a listed hazardous waste and a non-hazardous waste, unless the mixture is specifically excluded or no longer exhibits any of the characteristics of hazardous waste, and (4) is not excluded from regulation as hazardous waste. For the waste produced in LBP remediation, hazardous waste is waste that contains more than 5 ppm of leachable lead as determined by the TCLP test, or waste that is corrosive, ignitable, or reactive and is not otherwise excluded.
HEPA Filter:	A high-efficiency particulate air filter capable of removing particles 0.3 microns or larger in diameter with 99.97% efficiency. Also known as a P100 filter.
HEPA/Wet Wash/HEPA Cycle:	The cleaning cycle that begins with HEPA vacuuming, followed by a wet wash with trisodium phosphate detergent, some other lead-specific cleaning agent, or any other equally effective liquid cleaning agent, followed by a final pass with a HEPA vacuum over the surface.

HEPA Vacuum:	A vacuum system equipped with HEPA filtration.
Holding Area:	A secured area adjacent to the Waste and Equipment Decontamination/ Pass-Out Enclosure System located in an uncontaminated area used for temporary storage of waste prior to disposal.
Impact Surface:	An interior or exterior surface such as those on doors and doorjamb's subject to damage by repeated impacts.
Interim Control:	A set of measures designed to temporarily reduce human exposure or possible exposure to LBP hazards. Such measures include specialized cleaning, repairs, maintenance, painting, temporary containment, and management and resident education programs. Monitoring levels of lead exposure by Owners and re-evaluation by professionals are integral elements of interim controls. Interim controls include dust removal, paint film stabilization, treatment of friction and impact surface, and installation of soil coverings such as grass or sod, or land-use controls.
Lead-Based Paint:	Paint or other surface coating that contains an amount of lead equal to or in excess of 1.0 mg/cm ² , or more than 0.5% by weight. In the County of Los Angeles, the limit is 0.7 mg/cm ² .
Lead-Contaminated Dust:	Dust that contains an amount of lead equal to or in excess of 40 µg/ft ² for interior floor surfaces, 250 µg/ft ² for interior horizontal window surfaces, and 800 µg/ft ² for exterior floor and exterior horizontal window surfaces.
Lead-Contaminated Soil:	Bare soil that contains an amount of lead equal to or in excess of 400 ppm in children's play areas and 1,000 ppm in all other areas.
Lead Hazard:	Deteriorated lead paint, lead-contaminated dust, lead-contaminated soil, disturbing LBP without containment, or other nuisance that results in environmental lead contamination.
Lead Hazard Reduction Project:	A construction (repair, demolition, and/or rehabilitation) and an environmental decontamination project necessary for the abatement or interim control of lead paint hazards.
Lead Inspector/Assessor:	An individual who is certified by the CDHS to assess the degree of total hazards in residential or public buildings before, during, or after lead-related construction work.

Movable Object:	A piece of equipment or furniture in the work area that can be removed from the work area.
OSHA:	Occupational Safety and Health Administration 200 Constitution Avenue Washington, DC 20210 Local Office: 400 Oceangate, Suite 530 Long Beach, CA 90802 (310) 514-6387
Outside Air:	The air outside buildings and structures or the air outside a containment work area where LBP removal is being performed.
Owner's Representative:	An individual qualified by virtue of experience and education, and designated by the Owner as its Representative.
P100 Filter:	Particulate respirator filter (99.97% filter efficiency level) effective against all particulate aerosols.
Paint Film Stabilization:	The process of wet scraping, priming, and repainting deteriorated LBP in a dwelling. The process includes cleanup and clearance.
Patch Test:	A test method or procedure to assess the adhesion of an encapsulant coating to a substrate covered with a layer of LBP.
Personal Sampling:	Sampling of airborne lead concentrations within the breathing zone of an employee to determine the eight-hour, time-weighted average concentration in accordance with <i>29 CFR 1926.62</i> . 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 6 to 9 inches and centered at the nose or mouth of an employee.
Permissible Exposure Level (PEL):	50 µg/m ³ of air as an eight-hour, time-weighted average as determined by <i>29 CFR 1926.62</i> . If an employee is exposed for more than eight hours in a workday, the PEL shall be determined by the following formula: PEL (µg/m ³) = 400/Number of hours worked per day

Physician's Written Opinion:	A written opinion from the examining physician as to whether an employee has any detected medical conditions that would place the employee at an increased risk of material health impairment from exposure to lead, any recommended limitations on the employee or on the use of personal protective equipment such as respirators, and a statement that the employee has been informed by the physician of the results of the medical examination and of any medical conditions that may result from lead exposure.
Plasticize:	To cover floors, ceilings, and walls with plastic sheeting (polyethylene film) as herein specified.
Project Monitor:	An individual who is certified by the CDHS to oversee lead-related construction work in residential or public buildings, to ensure that the contract plans and specifications are followed, and to evaluate lead-related construction control.
RCRA:	<i>Resource Conservation and Recovery Act of 1976: an amendment to the Solid Waste Disposal Act of 1965.</i>
Remediation:	Lead hazard reduction through abatement or interim control.
Remediation Contractor:	The state-certified business entity, public body, or person performing the actual work on an LBP hazard control project.
Removal:	On-site or off-site removal of LBP from affected substrate by chemical or mechanical means.
Renovation:	Altering in any way one or more facility components. Operations in which load-supporting structural members are wrecked or taken out are excluded.
Replacement:	A strategy of abatement that entails the removal of building components that have surfaces coated with LBP such as windows, doors, and trim, and the installation of new components free of LBP.
Seal (Sealing):	The formation of an airtight connection between plasticized work areas and the outside environment.
Shower Room:	A room between the Clean Room and the Equipment Room in the Worker Decontamination Enclosure System with hot and cold or warm running water controllable at the tap and suitably arranged for complete showering during decontamination.

Staging Area:	An area adjacent to the Waste and Equipment Decontamination/Pass-Out Enclosure System where containerized lead-containing waste has been placed prior to removal from the work area, with facilities to clean the container holding the waste before it is passed out through the Waste and Equipment Decontamination/Pass-Out Enclosure System.
Structural Member:	Any load-supporting member of a facility (such as a beam or a load-supporting wall).
Transporter:	A person who transports hazardous waste offsite within the United States by air, rail, highway, or water, if the transport requires a manifest under <i>40 CFR 260.10</i> .
Treatment, Storage, and Disposal (TSD) Facility:	A facility licensed to handle hazardous waste.
Trisodium Phosphate (TSP) Detergent:	Detergent that contains at least 5% trisodium phosphate.
Type “C” Respirator:	A pressure demand, supplied-air respirator.
Ventilation System:	A portable exhaust system equipped with HEPA filtration and capable of maintaining a constant low-velocity airflow into contaminated areas from adjacent uncontaminated areas.
Visible Debris:	Any (particulate) lead dust or residue that is visually detectable on a surface without the aid of instruments.
Visible Emissions:	Any emissions that are visually detectable without the aid of instruments. This does not include condensed, uncombined water vapor.
Waste and Equipment Decontamination/Pass-Out Enclosure System:	A decontamination system used for transferring containerized waste or equipment from inside to outside the work area.
Wipe Sampling:	A sampling method used to determine if lead dust is present on surfaces.
Work Area:	Designated rooms, spaces, or areas of the project in which asbestos abatement actions are to be undertaken or which may become contaminated as a result of such abatement actions.

Worker Decontamination Enclosure System: A decontamination system consisting of a Clean Room, a Shower Room, and an Equipment Room separated from each other and from the containment work area or limited-containment work area by curtained doorways and airlocks connected directly to the work area.

ZPP: Zinc protoporphyrin; an indicator of chronic lead absorption.