# PART 1 – GENERAL

* 1. SUMMARY

1. Provisions of Division 01 apply to this section
2. Section Includes:
   * 1. Abatement, Lead Related Construction Work or painting of lead-containing materials and/or Lead Based Paint.
     2. Transportation and disposal of lead-containing materials and/or Lead Based Paint.
     3. **Attachment A.**
3. Regulatory Requirements shall include, but not be limited to:

1. Cal/OSHA Title 8, California Code of Regulations (CCR)

1. California Air Resources Board Ambient Air Quality Standard, Title 24 CCR
2. California Department of Health Services, Title 17, CCR
3. Cal/EPA, Title 22 CCR

5. California Labor Code, Division 5, Part 1, as it pertains to safety in employment and with the applicable provisions of the Title 8, CCR as it pertains to Occupational Safety and Health in the work place.

1. HUD – Title X, Residential Lead-Based Paint Hazard Reduction Act of 1992

# SECTION DEFINITIONS AND ACRONYMS

A. AAS - Atomic Absorption Spectrophotometry used for lead paint chip and dust wipe sample analysis.

B. Abatement – Any set of measures designed to reduce or eliminate lead hazards or Lead Based Paint for public and residential buildings, but does not include containment or cleaning.

C. Action Level – Means the Action Level as defined in Title 8, California Code of Regulations, Section 1532.1.

D. ANSI – American National Standards Institute

E. ASTM – American Society for Testing and Materials

F. Building ID number or code – A six digit alphanumeric identification code assigned to each building on an Owner site, also referred to as the insurance code, ID number or similar terms.

G. Certificate – Means the document issued by DHS to an individual meeting the certification requirements as described in CCR Title 17, Sections 35083, 35085, 35087, 35089, or 35091.

H. Clean Room – An uncontaminated area or room which is a part of the worker Decontamination Enclosure System with provisions for storage of worker's street clothes and clean protective equipment.

I. Clearance Inspection – Means visual examination and, as applicable, collection of environmental samples upon completion of the Work of this section.

J. Component – Means a structural element or fixture, including but not limited to, walls, floors, ceilings, doors, window molding, trim, trestles, tanks, stairs, railings, cabinets, gutters, or downspouts.

K. Curtained doorway – A device to allow ingress and egress from one room to another while permitting minimal air movement between the rooms, typically constructed by placing two overlapping sheets of plastic over an exiting or temporarily framed doorway, securing each along the top of the doorway, securing the vertical edge of one sheet along one vertical side of the doorway and securing the vertical edge of the other sheet along the opposite vertical side of the doorway. Other effective designs may be submitted for review.

L. Decontamination – The process of eliminating lead contamination from building surfaces, and property by cloths, mops, or other utensils dampened with water and disposed of as lead contaminated waste.

M. Decontamination Enclosure System – A minimum a two-stage Decontamination unit consisting of a compartment for Decontamination, and a Clean Room. Unless otherwise specified, it shall be adjacent to the Abatement area.

N. Demolition – The wrecking or taking out of any load supporting structural member of a facility together with any related handling operations.

O. Deteriorated Lead Based Paint – Means Lead Based Paint or a surface coating that is cracking, chalking, flaking, chipping, peeling, non-intact, failed, or otherwise separating from the substrate to which it is applied to.

P. DHS – California Department of Health Services

Q. DHS-Approved Course – Means any lead-related construction course that satisfies the requirements specified in CCR Title 17, Sections 35056, 35061, 35066, or 35067 as determined by DHS pursuant to Sections 35076 and 35078.

R. DOSH – California Division of Occupational Safety & Health or Cal/OSHA.

S DOT – Department of Transportation

T. DTSC – California Department of Toxic Substances Control

U. Encapsulating Material – Are coatings or rigid materials adhesively applied to Lead Based Painted surfaces in the Encapsulation process.

V. Encapsulation – The application of an Encapsulating Material to Lead Based Paint to provide a barrier between the Lead Based Paint and the environment.

W. Enclosure – A rigid durable barrier mechanically attached to building Component, with all edges and seams sealed with caulk or other sealant.

X. Fixed Object – A piece of equipment, furniture, or improvement in the Work Area, which cannot be removed from the Work Area.

Y. Hazardous Waste – Means any waste stream determined by an Owner approved laboratory to exceed the regulatory thresholds for lead hazardous waste.

Z. HEPA Filter – Means a filtering system capable of trapping and retaining at least 99.97% of all mono-dispersed particles 0.3 micrometers in diameter or larger.

AA. HEPA Vacuum – A vacuum system furnished with HEPA filtration.

BB. HUD – United States Department of Housing and Urban Development

CC. HVAC – Heating, Ventilation, and Air Conditioning system.

DD. ICP-AES – Means Inductively Coupled Plasma-Atomic Emission Spectroscopy used for heavy metal analysis, including lead.

EE. Lead Based Paint – Means paint or other surface coatings that contain an amount of lead equal to or greater than 0.7 milligrams per square centimeter (0.7 mg/cm2) or equal to or greater than 0.5% by weight.

FF. Lead Containing Paint – Means paint or other surface coatings that contain lead in an amount equal to or greater than 0.06% lead dry weight (600 ppm) but does not meet the definition of Lead Based Paint. In the absence of paint chip or surface coating bulk sample results, any surface coating shall be assumed to be above 0.06% lead dry weight (600 ppm) until surface coating samples are collected and analyzed that indicate otherwise. Lead concentration shall be determined by a method that has an accuracy of not less than plus or minus 25% at 0.06% lead dry weight, to a confidence level of 95%.

GG. Lead Contaminated Dust – Means dust that contains an amount of lead equal to, or greater than, forty micrograms per square foot (40 μg/ft2) for interior floor surfaces; two hundred and fifty micrograms per square foot (250 μg/ft2) for interior horizontal window surfaces; and eight hundred micrograms per square foot (800 μg/ft2) for exterior floor and exterior horizontal window surfaces.

HH. Lead Contaminated Soil – Means bare soil that contains an amount of lead equal to, or greater than, two hundred fifty-five parts per million (255ppm).

II. Lead Hazard – Means deteriorated Lead Based Paint, Lead Contaminated Dust, Lead Contaminated Soil, the disturbance of Lead Based Paint or Presumed Lead Based Paint without containment, or any other operation that may result in persistent and quantifiable lead exposure.

JJ. Lead Inspection – Means a surface by surface investigation to determine the presence of Lead Based Paint as described in Chapter 7: Lead Based Paint Inspection, “ Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing,” U.S. Department of Housing and Urban Development, 1997 Revision.

KK. Lead Related Construction Work – Means any construction, alteration, painting, Demolition, salvage, Renovation, repair, or maintenance of any residential or public building, including preparation and cleanup that, by using or disturbing lead-containing material or soil, may result in significant exposure of adults or children to lead.

LL. Lead Safe Schools Program – Means the training program for lead safe working practices as developed by the Labor Occupational Health Program at U.C. Berkley.

MM. Location Code – Refers to a unique four digit numeric code assigned by the Owner to each of its Project sites.

NN. Member – A Component part of a structure complete in itself.

OO. Movable Object – A piece of portable equipment or furniture in the Work Area, which can be removed from the Work Area.

PP. NESHAP – The National Emission Standards for Hazardous Air Pollutants (40 CFR Part 50.12)

QQ. NIOSH – The National Institute for Occupational Safety and Health

RR. Owner Consultant (OC) – Refers to the firm, company or individual designated by the Owner.

SS. Painting Contract – For purposes of this section, a painting contract is a Contract with the Owner to perform painting on existing facilities where Lead Based Paint, Lead Containing Paint, Presumed Lead Based or Presumed Lead Containing Paint will be disturbed or abated.

TT. P.E.L. – Means permissible exposure limits as defined in Title 8, California Code of Regulations, Section 1532.1.

UU. Plasticize – To cover floors, walls, and equipment with plastic sheeting as specified herein.

VV. Portable Mechanical Ventilation System – A portable exhaust system furnished with HEPA filtration and capable of providing a constant air flow into regulated Work Area from adjacent areas and exhausted outside the regulated area.

WW. Presumed Lead Based Paint – Means paint or surface coating affixed to a Component in or on a structure, excluding paint or surface coating affixed to a Component in or on a residential dwelling constructed on or after January 1, 1979, or a school constructed on or after January 1, 1993.

XX. Removal – Means all operations where Lead Based Paint is removed or stripped from structures or substrates including Demolition.

YY. Renovation – Means the modifying of any existing structure, facility, or portion thereof.

ZZ. Replacement – Means Removal of an entire building Component coated with Lead Based Paint and replacing it with a lead free Component.

AAA. SCAQMD – South Coast Air Quality Management District

BBB. STLC – Means Soluble Threshold Limit Concentration used in the State of California in conjunction with TTLC to determine lead hazardous waste limits. If the STLC result is equal to or exceeds 5 mg/L the waste is deemed to be hazardous.

CCC. Surfactant - A chemical wetting agent added to water.

DDD. TCLP – Means Toxicity Characteristic Leaching Procedure used to determine the federal Resources Conservation Recovery Act (RCRA) lead hazardous waste limits. If the results equal or exceed 5 mg/L the waste is deemed to be hazardous.

EEE. TTLC – Means Total Threshold Limit Concentration used in the State of California in conjunction with STLC to determine lead hazardous waste limits. If the results are equal to or exceeds 1000 mg/kg, the waste is deemed to be hazardous.

FFF. Visible Emissions – Any emissions from a known or suspected lead-containing material that is visually discernible.

GGG. Wet Cleaning – The process of eliminating lead contamination from building surfaces and/or objects by cloths, mops, or other utensils dampened with amended water and afterwards being disposed of as hazardous waste.

HHH. Work Area – Means an area where known or Presumed Lead Based Paint is disturbed or Abatement is conducted.

III. X-Ray Fluorescense (XRF) Analyzer – Means a direct reading instrument that determines the lead content of the surface coatings in milligrams per square centimeter (mg/cm2) using the principle of x-ray fluorescence.

# POLICIES AND PROCEDURES

1. The Owner has a zero-tolerance policy for uncontrolled lead releases during Lead Related Construction Work, Lead Containing Paint disturbance, or Abatement activities. A lead release requiring an emergency response is any disturbance resulting in the uncontrolled release of lead containing materials. Upon observation of any visual emissions, immediately stop the Work, vacate the Work Area, and provide written notification to the Owner Consultant.
2. Pre-qualified Abatement Subcontractors are not permitted to subcontract any Abatement Work to a lower tier Subcontractor without the prior written approval of the Owner.
3. Do not furnish a reduced pressurization and filtration system in violation of, or in infringement upon, any patent.

D. Owner Consultant shall provide oversight for all Projects that have the potential to disturb lead containing or Lead Based Paint. Prior to the commencement of such Work, provide written notification to the Owner Consultant.

# 1.04 COORDINATION

A. Coordinate the Work of this section directly with the Owner and/or Owner Consultant.

1.05 SITE SECURITY

A. The Work Area is restricted to authorized, trained, and protected personnel. A list of authorized personnel shall be established and posted at the entrance of the Work Area by the Owner Consultant prior to commencement of the Work.

1. Report to the Owner Consultant any unauthorized entry into the Work Area. Following notification, a written report of the incident shall be provided to the Owner Consultant.
2. A logbook shall be maintained at the entrance of the Work Area. All persons entering the Work Area shall record name, company affiliation, time in, and time out for each entry and exit.
3. Access to the Abatement Work Area shall be through the Decontamination Enclosure System only. All other means of access shall be blocked or locked so as to prevent entry to or exit from the Work Area. Emergency exits shall be operable from inside the Work Area.
4. Maintain Work Area security during Abatement and/or Lead Related Construction Work. All Work Areas and ancillary equipment accessible to non-authorized personnel shall be protected from unauthorized access by constructing a minimum barrier of 3/8 inch CDX plywood supported by 2" x 4" studs, 16 inches on center. An access door shall be provided with hasp and padlock sufficient to prevent unauthorized entry. A key shall be provided to the Owner and Owner Consultant. Required barriers within an occupied building shall be furnished with sheathing as required by state and local fire protection regulations.
5. Remove all barriers upon the completion of the Work of this section and unless otherwise specified, repair and/or replace to its original condition, all damage resulting from installation, use, and removal of the barriers.

1.06 EMERGENCY PLANNING

* 1. Emergency planning and procedures shall be developed, submitted, reviewed, and agreed to by the Owner Consultant prior to the commencement of lead-related construction and/or Abatement Work.
  2. Emergency procedures shall be provided in the written languages understood by all employees working on the Project and shall be prominently posted at the entrance of the Decontamination Enclosure System. Prior to entering the Work Area, all parties must read and sign these procedures to acknowledge receipt and understanding of the Work Area layout, location of emergency exits, and emergency procedures.

C. Emergency planning shall consider the effects of fire, explosion, toxic atmospheres, electrical hazards, slips, trips and falls, confined spaces, and heat related injury. Develop and provide written procedures and training to all employees.

D. Employees shall be trained in evacuation procedures in the event of workplace emergencies.

E. In the event of non-life threatening situations requiring medical treatment, injured or otherwise incapacitated employees shall decontaminate following normal procedures with assistance from fellow workers if necessary, before exiting the Work Area.

F. In the event of life threatening injury or illness requiring immediate medical treatment, worker Decontamination shall be given minimum priority. Provide all measures to stabilize the injured worker remove them from the Work Area and secure proper medical treatment.

G. Telephone numbers of all emergency response personnel shall be prominently posted at the entrance of the Decontamination Enclosure System along with the location of the nearest telephone. In addition to the 911 emergency number, post the address and telephone number of the nearest emergency medical services provider.

H. Provide at least one (1) employee on the Project site at all times during progress of the Work that is trained and certified in first aid and cardiopulmonary resuscitation (CPR). This employee shall be identified by name and proof of training shall be provided to the Owner Consultant prior to the commencement of the Work of this section.

I. Provide at least one (1) 4A/60BC dry chemical extinguisher in the Decontamination compartment. All workers shall be trained in the proper operation of fire extinguishers.

J. Emergency exits shall be provided and clearly marked with arrows or other clearly visible markings to permit easy identification from anywhere within the Work Area. Exits shall be secured to prevent access from uncontaminated areas while still permitting emergency egress. Exits shall be properly sealed with polyethylene sheeting, which can be cut to permit emergency egress. Emergency exits may lead through the Decontamination Enclosure System or other alternative exits as required by fire officials.

1.07 LICENSING

A. The Work of this section shall be performed by an entity duly licensed in the State of California in accordance with the provisions of Chapter 9 of Division 3 of the Business and Professions Code, as amended.

* 1. QUALIFICATIONS

A. Only safety pre-qualified bidders on the pre-approved bidders list are qualified to be awarded an Abatement Contract or Painting Contract be listed as a Subcontractor for lead Abatement Work or Painting Contract.

B. Where the scope of the Work includes the painting and/or refinishing of existing surfaces, only safety pre-qualified bidders on the pre-approved bidders list are qualified to be awarded a painting Contract or be listed as a Subcontractor for painting Work.

C. Before any workers perform Abatement Work or Work of this section where the P.E.L. is exceeded, submit proof of DHS training and certification. No Work shall be performed until the Owner Consultant has reviewed and approved DHS training and certifications.

D. All workers shall be in personal possession of a wallet DHS certification card at all times while they are performing Abatement Work on the Project site.

E. All workers performing lead Abatement, Lead Related Construction Work, or disturbance of Lead Containing Paint where the exposure level exceeds the P.E.L., shall possess current DHS certification and at least one DHS Certified supervisor shall be available as required by Title 17, CCR Division 1, Chapter 8.

* 1. TRAINING
  2. Lead Related Construction Work shall be performed by personnel with the following training, as applicable:

1. The Lead Related Construction Work, specified herein, shall be performed by individuals trained and qualified in the techniques of lead-related construction, handling, disposal of lead-based and Lead Containing Paint, and the subsequent cleaning of contaminated areas. These individuals must comply with all applicable Federal, State, and Local regulations including, but not limited to, DHS accredited training and certification, and must be capable of and willing to perform the Work of this section.

1. Training specific to the performance of Lead Related Construction Work shall be provided to employees prior to performing the Work of this section.

3. Training specific to the operation and use of fire extinguishers.

* 1. EXPOSURE ASSESSMENT

A. Disturbance of Lead Containing Paint, as defined in this Specification, disturbed by tasks not included in Title 8, CCR Section 1532.1, Subsection (d)(2), shall require worker-exposure monitoring upon initiation of the Work. The workers performing these tasks shall be trained in accordance with the Hazard Communications Standard, Section 5194, including but not limited to, the requirements concerning warning signs and labels, Material Safety Data Sheets (MSDS), and employee information and training.

B. Provide an exposure assessment where the workers are performing Lead Related Construction Work. If historical data, collected within the 12 months prior to the Work performed, indicates worker exposure is below the P.E.L. , and the Work being performed closely resembles the process, type of material, control methods, work practices, and environmental conditions, additional exposure assessment is not required.

C. For Lead Related Construction Work where there is objective data or an exposure assessment demonstrating that the Lead Based Paint, or a specific process, operation or activity other than Abatement involving lead cannot result in employee exposure to lead at or above the P.E.L. during the specific process or handling, employees trained as required by Title 8, CCR Section 1532.1, including the training topics of the Lead-Safe Schools Program, may perform the Lead Related Construction Work.

D. Where Work being performed indicates an exposure above the Action Level, each employee is required to have current blood lead level and Zinc Protoporphorin testing, medical clearance for negative pressure respirator use, and respirator fit testing.

E. If there is no objective data or a negative exposure assessment fulfilling the above requirements, all Lead Related Construction Work identified as a trigger task by Title 8, CCR 1532.1 shall be performed by workers who have received training as required by Title 8 CCR, Section 1532.1. This training shall, at a minimum, include the training topics of the Lead Safe Schools Program. An exposure assessment is required to be performed upon initiation of Work.

F. The required exposure assessment shall not exceed 12 months from the date the samples were collected to the date the Lead Related Construction Work or disturbance of Lead Containing Paint is performed.

G. The submission and review by the Owner Consultant of the objective data or exposure assessment is required prior to performing Lead Related Construction Work.

1.11 SUBMITTALS

A. Provide in accordance with Division 01 and this section.

B. Prior to performing the Work of this section, submit the following procedures to the Owner Consultant:

1. An Abatement plan including, but not limited to:

a. A detailed written description of the measures and management procedures, including the containment that will be utilized during Abatement to prevent exposure to lead hazards. Shop Drawings shall indicate the containment locations.

b. A detailed written description of the Abatement, including methods of Abatement, locations of rooms and building Component where Abatement is planned.

2. Required air monitoring procedures (Cal/OSHA mandatory and SCAQMD permits for air filtering equipment).

3. Decontamination procedures for personnel, Work Area, and equipment.

4. Procedures for handling and disposing of waste materials, including disposal facility.

5. Provide the procedures to be used for capturing debris while disturbing overhead materials.

6. Procedures for final Decontamination and cleanup.

7. Procedures for dealing with heat stress during Abatement.

8. Emergency procedures during Abatement.

C. Prior to performing Abatement Work of this section, submit the following Shop Drawings to the Owner Consultant:

1. Preparation of Work Area.

2. Layout and construction of Decontamination Enclosure System and barriers for isolation of the Work Area described in this Specification and required by applicable regulations.

D. Prior to performing the Work of this section, submit the following Product Data to the Owner Consultant:

1. Product Data relative to personal protective equipment including respiratory protection and protective clothing.

1. Material safety data sheets and technical specifications for proposed materials.

E. Prior to performing the Work of this section, submit the following notifications to the Owner Consultant:

1. Evidence of notification to Cal/OSHA as required by Title 8 CCR, Section 1532.1, where applicable.

2. Notify DHS no less than five days in advance of Abatement by submitting an Abatement of Lead Hazard Notification, DHS Form 8551.

F. Prior to performing the Work of this section, submit the following documentation to the Owner Consultant:

1. A list of employees who will participate in the Project, including delineation of experience, training, and assigned responsibilities during the Project.

2. Submit proof satisfactory to the Owner Consultant that required permits, site location, and arrangements for transport and disposal of lead containing waste has been performed in accordance with Federal, State, and local regulations.

3. Submit proof of training for each worker who will perform Abatement or Lead Related Construction Work.

4. Submit manufacturer’s certification that HEPA Vacuums, air filtration units and other local exhaust ventilation equipment conform to ANSI Z9.2-79, as applicable.

5. When HEPA Vacuums are utilized on the Project, provide the maintenance and filter change log for these before they are brought onto the Project site.

6. Provide the current SCAQMD permit for each HEPA Vacuum and Portable Mechanical Ventilation System before they are brought onto the Project site.

7. Where biological monitoring is required, submit test result documentation verifying all employees have completed blood lead level and Zinc Protoporphorin tests in accordance with Title 8 CCR, Section 1532.1.

8. All workers are required to submit a signed Code of Conduct form.

G. Prior to performing the Work of this section, submit the following Samples to the Owner Consultant:

1. Submit a Sample of all forms to be used in documenting the Work of this section.

H. Prior to performing the Work of this section, submit the following schedule to the Owner Consultant:

1. An intended sequence of Work and construction schedule. Coordinate both the sequence and durations with the Owner.

I. Prior to performing the Work of this section, submit all other required items to the Owner Consultant.

J. During the performance of the Work of this section, submit the following documentation to the Owner Consultant:

1. Submit documentation from a physician certifying that all employees who wear a negative pressure respirator are medically cleared to do so without suffering adverse health effects as required by DOSH regulations. The certification shall state that the employee or agent may perform Lead Related Construction Work and wear a negative pressure respirator without restrictions. Provide information to the examining physician about unusual conditions in the workplace environment that may impact the employee’s ability to perform Work activities.

2. During the performance of the Work of this section, and before additional supervisors or workers are permitted to perform the Work of this section, submit proof of DHS training and certification, where applicable. No additional supervisors or workers are permitted upon the Project site until the Owner Consultant has approved the DHS training and certifications, when required.

3. Submit weekly job progress reports detailing Abatement and/or Lead Related Construction Work activities for Projects that will exceed thirty (30) days. Include review of progress with respect to previously established Milestones and schedules, major problems and action taken, injury reports, equipment breakdown, and air and/or wipe sampling results.

4. Within five (5) workdays of transport and/or disposal, submit copies of all transport manifests, disposal receipts, analytical data, and weight certificates for all hazardous waste removed from the Work Area during the Lead Related Construction Work and/or Abatement Work. Weight certificates shall indicate by pounds the net weight of waste disposed of from the Project site as indicated on the associated manifest.

5. Submit daily, copies of Abatement Work site entry logbooks with information on worker and visitor access.

6. Submit logs on a weekly basis documenting filter changes on respirators, HEPA vacuums, HEPA filtered ventilation units, water filtration units, and other approved engineering controls, as applicable.

7. Submit results of air and/or wipe sampling data (as applicable) collected during the course of the Abatement and/or Lead Related Construction Work including DOSH compliance air monitoring results.

K. During the performance of the Work of this section, submit all other required items.

* 1. PRE-ABATEMENT MEETING

A. Attend a meeting to be held prior to the commencement of the Work of this section. Attending this meeting shall be representatives of the Owner, the Owner Consultant if applicable, and the testing/monitoring personnel who shall actually participate in the testing/monitoring program. Secure the attendance of the individual who will be the Project site competent person for the Abatement Work.

B. At this meeting provide all required submittals except for those to be submitted during progress of the Work. In addition, provide detailed information concerning:

1. Preparation of Work Area and Shop Drawings.

2. Personal protective equipment, including respiratory protection and protective clothing.

3. Employees who will participate in the Project, including delineation of experience, training, and assigned responsibilities during the Work.

4. Decontamination procedures for personnel, Work Area, and equipment.

5. Abatement methods and procedures to be provided.

6. Required air monitoring procedures (pre-Abatement, Cal/OSHA mandatory, and SCAQMD requirement).

7. Procedures for handling and disposing of waste materials, including disposal facility.

8. Procedures for final Decontamination and cleanup.

9. A sequence of Work activities and performance schedule.

10. Procedures for dealing with heat stress.

11. Emergency procedures.

PART 2 – PRODUCTS

2.01 Materials and Equipment

1. Materials:

1. Deliver all materials in the original sealed packages, containers, or bundles bearing the name of the manufacturer and brand name.

2. Store all materials, subject to damage off the ground, away from wet or damp surfaces, and under cover sufficient enough to prevent damage or contamination. Replacement materials shall be stored outside of the Work Area until area is cleared for normal occupancy.

3. Damaged, deteriorating, or previously used materials shall not be furnished and shall be removed from the Project site and legally disposed of.

4. A sufficient supply of disposable mops, rags, and sponges for Work Area Decontamination shall be provided.

5. Unless otherwise specified, the Owner will provide water for construction purposes. Connect to existing system as required.

6. All products brought onto the Project site shall be accompanied by their respective Material Safety Data Sheet, which shall be maintained on the Project site.

7. All plastic, polyethylene sheeting or visqueen shall be a fire retardant type. Provide documentation from the manufacturer verifying compliance with this requirement.

8. Polyethylene sheeting furnished for the Decontamination Enclosure System shall be opaque white or black in color and shall be a minimum of 6-mil thick.

9. Surfactant (wetting agent) shall be a material that, when tested, demonstrates a surface tension of 29 dynes/cm as tested in its properly mixed concentration, using ASTM method D1331-56-"Surface and Interfacial Tension of Solutions of Surface Active Agents." Where Work Area temperature may cause freezing of the Amended Water solution, the addition of approved antifreeze in a manufacturer recommended amount is permitted.

B. Equipment:

1. Disposal bags shall be of 6-mil polyethylene, pre-printed with labels as required by applicable Cal/OSHA and DOT requirements.

1. Provide labels as per DOT requirements for disposal containers.
2. Provide warning signs as required by Cal/OSHA.
3. Disposal containers shall meet requirements of Title 22, CCR.
4. Provide a sufficient supply of scaffolds, ladders, lifts, and hand tools, as needed to complete the Work.

6. Provide sprayers with pumps capable of providing amended water in sufficient quantity to adequately wet the material to be abated or for Lead Related Construction Work.

7. Provide a sufficient supply of HEPA filtered vacuums to maintain a clean environment in compliance with this section.

* + - 1. When an enclosure requiring negative pressure is specified, a sufficient quantity of air-filtration ventilation units furnished with HEPA filtration and operated in accordance with ANSI Z9.2-79 and EPA guidance documents shall be utilized to provide one workplace air change every 15 minutes and creating a pressure differential of -0.02 inches of water everywhere within the enclosure when compared to the area outside the enclosure. A log documenting the filter change history of each unit shall be required before use, and any unit without this log shall have all filters changed and the unit decontaminated.

9. When rental equipment is to be used in Abatement areas or to transport lead contaminated waste, a written notification concerning the intended use of the rental equipment shall be provided to the rental agency with a copy submitted to the Owner.

10. When performing chemical Removal, provide portable eyewash station(s) that meet ANSI standards and are accessible to workers within 10 seconds.

1. Additional safety equipment, as necessary, shall be provided to all workers and authorized visitors.
2. All equipment delivered to the Project site shall be free of all debris suspect of containing lead. No equipment with suspect debris in or on it shall be permitted on Owner properties and/or the Project site.

13. When roll-off disposal containers are delivered to a Project site, all four (4) wheels of each container shall be moved and rested upon a minimum size sheet of plywood of 4' X 4' X 3/4".

14. Lighting shall be provided in an amount sufficient to illuminate the Work Area for the purpose of safe visual working conditions and to permit examination of all surfaces where Work is performed.

2.02 EMPLOYEE PERSONAL PROTECTIVE EQUIPMENT

A. Respiratory Protection:

1. Submit NIOSH approvals for all respiratory protective devices utilized on the Project site. Include manufacturer certification of HEPA filtration capabilities for all cartridges and filters. Filter cartridges shall be furnished with the NIOSH P-100 designation.

* 1. Provide respiratory protection to all employees in compliance with CCR Title 8, Sections 1532.1 and 5144, as determined by the employee exposure assessment.
  2. In the absence of an exposure assessment, base respiratory protection on the requirements of Title 8, CCR Section 1532.1, specifically subsection (d).
  3. In addition to P-100 filters, provide the appropriate respirator filter cartridges for exposure to other airborne contaminants generated during the Abatement process.
  4. Provide authorized visitors with a respirator and cartridges sufficient to protect individuals from exposure to hazardous environments generated during the Abatement activity.

B. Fit Testing:

* + - 1. Perform fit testing in accordance with Title 8 CCR, Section 5144.
      2. Submit documentation of respirator fit testing for all individuals entering the Work Area.
      3. Maintain and submit to the Owner a copy of the written respiratory protection program.

C. Personal Protective Clothing and Equipment:

* + - 1. Provide eye protection to employees sufficient to protect employees from debris during Work progress when full-face respirators are not being utilized.
      2. Provide and require the use of eye protection when employees are working with a material that may splash or fragment, as specified by the Material Safety Data Sheet for a given product, or as required by Title 8, CCR.
      3. Spectacle kits and eyeglasses must be provided for employees who wear glasses and who must wear full-face piece respirators. Provide respirators that have been tested and approved by the National Institute of Occupational Safety and Health for use in lead-contaminated atmospheres.
      4. Provide full-body disposable protective clothing, including head, body, and foot coverings to all workers and authorized visitors who enter the Work Area, in sizes adequate to accommodate movement without tearing. A new suit shall be provided and donned for each separate entry.
      5. If washable clothing is to be worn underneath disposable protective clothing, it shall be provided to all Abatement workers.
      6. Provide a clean staging area for workers and others to store street clothes and personal protective equipment.
      7. Disposal suits shall be collected in an appropriate disposal container at the entrance of the Abatement Work Area.
      8. Abatement workers are required to wear nonskid footwear sufficient to protect them from workplace hazards. Disposable clothing shall be adequately sealed to the footwear to prevent body contamination.
      9. Hand protection shall be provided, and workers shall be required to use lotion sufficient quantities to protect the worker when chemicals or other physical hazards exist.
      10. As required by the Work site and applicable safety regulations, provide head protection and require the use thereof.

11. All worker protection equipment shall be ANSI approved.

PART 3 - EXECUTION

* 1. LEAD RELATED CONSTRUCTION WORK

A. Work Area Preparation and Work Practices:

1. Where exposure monitoring indicates Worker exposure is below the P.E.L., comply with the requirements of this section and the “Monitoring” section of this Specification.

2. All disturbance of lead containing materials shall be performed using wet methods.

3. Work requiring overhead disturbances shall require a means of capturing debris, thus preventing an uncontrolled release on the worker or the surfaces below.

4. For disturbances utilizing local exhaust dust collection devices the equipment shall be designed and furnished with a HEPA filtered vacuum attachment approved by the manufacturer.

5. Where Components are to be removed, all loose Lead Based Paint and Lead Containing Paint shall be removed by manual means using wet methods.

6. Where a Component is attached and painted onto another surface and the Component is to be removed from the adjoining surface the paint shall be cut with a razor knife to reduce the potential of paint chip debris during Component removal.

7. If a Component being removed will be disposed of rather than reinstalled, manually cut the Component into manageable sections for disposal using wet methods or mechanically cut using a manufactured approved HEPA filtered local exhaust dust collector.

8. If a Component is to be reused, loose paint or rough edges may require scraping or sanding. All scraping or sanding must be performed manually using wet methods or mechanically with a manufactured approved HEPA filtered local exhaust attachment.

9. For solid core surfaces where penetration and/or welding are required the lead containing material shall be removed from the area impacted using wet methods. All layers of Paint shall be removed before impact to the surface commences.

B. Clean Up Procedures:

1. During the entire process of Lead Related Construction Work, clean all debris generated using wet methods and/or HEPA Vacuuming.

2. At the completion of the Lead Related Construction Work, clean all surfaces within the impacted Work Area.

3. When HEPA filtered Vacuums are utilized, vacuum from the area of impact to the outer perimeter of the polyethylene sheeting to remove all visible debris. If vacuuming cannot remove all visible debris, wet wiping will also be required.

4. When wet wiping the Work Area, wipe from the area of impact to the outer perimeter of the polyethylene sheeting to remove all visible debris.

5. All tools and equipment utilized in the Work Area shall be thoroughly wet wiped to remove visible debris.

* 1. ABATEMENT

A. Work Area Preparation:

1. Clean areas to be isolated by HEPA Vacuum prior to installation of polyethylene sheeting.

2. Seal the Work Area with a layer of 6 mil thick polyethylene sheeting prior to any Lead Based or Lead Containing Paint Removal or disturbance by covering all vents, windows, door openings, and any non-Moveable Objects such as lockers, etc.

3. Install a minimum of two (2) layers of 6 mil thick polyethylene sheets on floors, fastened by waterproof tape and other means as necessary to secure the sheeting.

4. The covering on windows, exterior doors, and vents shall be installed from the outside to facilitate Work on them from the inside.

B. Decontamination Enclosure System:

1. At a minimum a two-stage Decontamination Enclosure System consisting of a compartment for Decontamination and a Clean Room shall be constructed and used.

2. Unless otherwise specified, the Decontamination Enclosure System shall be adjacent to the Abatement area.

3. Other enclosure methods may be used if submitted and approved by the Owner Consultant.

C. Removal and Replacement Substrates with Lead Based Paint:

1. Except as noted in the Specifications and Drawings, replace substrate with material of the same or better quality. Substrates include, but are not limited to doors, windows, moldings, casements, mantels, trims, skirting, baseboards, and associated hardware and fasteners.

2. Areas adjacent to substrate Removal shall be protected from damage. Damages shall be repaired or replaced to original condition.

* + 1. Substrates that are removed for Replacement shall be wrapped and stored for disposal. Disposal shall be in accordance with the applicable codes and sections of this Specification.
    2. After Removal, the areas disturbed shall be cleaned and a Clearance Inspection performed in accordance with the procedures described in this Specification.

D. Abrasive Removers – Machine Sanders:

1. Machine sanders shall be furnished with a HEPA Vacuum system approved by the manufacturer.

2. Sanding shall only be performed on flat surfaces that allow the HEPA Vacuum dust collection attachment to come into tight contact with the surface being sanded.

3. Remove Lead Based Paint down to the bare substrate surface. If the pigment cannot be removed without damaging the substrate, submit a Request for Clarification to the Owner Consultant.

4. Protect adjacent surfaces from damage from machine sanding. Repair and/or replace all damaged surfaces.

E. Chemical Removal-On-Site Chemical Removal:

1. No chemical Removal shall be performed on interior surfaces unless specifically called for and designed in the Specifications or the Abatement plan of the Project.

2. Owner approved chemical removers shall be compatible with and harmless to the substrate. On masonry surfaces chemical removers shall contain anti-stain formulation that inhibits discoloration.

3. Chemical Removal Agent Neutralizer: Use chemical Removal agent neutralizers on exterior surfaces only. Neutralizers shall be compatible with and not harmful to the substrate. Neutralizers shall be compatible with the Removal agent that has been applied to the surface substrate.

4. Apply chemical Removal agents and neutralizers in accordance with the recommendations of the manufacturer and the following:

a. Adhere to all health and safety regulations and other Specification section requirements. Stripping agents shall not be allowed to penetrate wood or other fibrous substrates.

b. Remove the softened paint by scraping or wire brushing.

c. Protect adjacent areas from damage from Removal agent during the course of Work.

F. Chemical Removal – Off-Site Chemical Removal – Structures of Historical Significance Only:

* + - 1. Remove and transport Lead Based Painted Component in accordance with this Specification. Transport the Component to an off-site location. Remove Lead Based Paint by chemical Removal. Neutralize and clean the Component. Return Component to the Project site free of lead-containing materials and reinstall.
      2. Take extreme care in removing Component to be taken off-site, to prevent damage. In addition:

a. Component shall be marked and identified using an inconspicuous engraving, to insure reinstallation in original location.

b. Hardware associated with a Component shall be bagged and marked.

c. If required, hardware shall be chemically stripped, cleaned, or reconditioned.

d. Dispose of hazardous waste generated by the off-site stripping of Lead Based Paint as required by federal, state, and local regulations.

e. Do not transport hazardous waste to Owner properties and/or facilities.

f. Protect the Component and the adjacent areas from which Component are removed from damage by the Removal and reinstallation procedures.

1. Water Jet Washing:
2. The purpose of the Water Jet Washing process is to remove Lead-Based and Lead Containing Paint from exterior masonry substrate.
3. If this procedure is selected, submit a Work plan to the Owner Consultant which includes, but is not limited to, interim controls, paint stabilization, and capture of waste water.
4. Encapsulation – Interior and Exterior - Coated Sealer System:

1. Materials: - Elastic acrylic coating shall be heavy bodied and warranted by the manufacturer to be compatible with the substrate. Elastic acrylic coating shall be long lasting and resist cracking, peeling, algae, and fungus.

2. Submittal: Submit two Samples, 5-1/2” x 8,” of the Encapsulation material to the Owner Consultant.

1. Encapsulation coatings shall be applied in accordance with the manufacturer’s recommendations and the following conditions:
   1. Remove surface dust and debris by scrubbing with a non-residue detergent solution, and rinsing. Remove loose paint until a sound, intact edge is achieved. Remove and replace loose plaster prior to the coating application. Proper safety procedures and lead dust control method in this Specification must be utilized.

b. Apply Encapsulation coatings to the substrate in a continuous coat to seal the surface being coated. The number of coats required and coverage rates shall be in accordance with the manufacturer’s recommendations.

c. Repair all materials that lift and peel after the application of the Encapsulation coating by scraping until a sound surface is obtained. The edges shall be feathered, and a reapplication of an Encapsulation coating shall be applied.

1. Remove, or cover as directed, existing fixtures located on surface to be coated, including but not limited to, electrical receptacles, switches, exhaust fans, and hardware.
2. Protect adjacent surfaces and existing fixtures from damage by coating system. Damages to adjacent surfaces and existing fixtures due to lack of protection or improperly applied protection shall be repaired and/or replaced.
3. Encapsulation – Interior and Exterior - Flexible Wall Covering:

1. Materials: Wall covering shall be a reinforced fiber type that forms a secure bond with the substrate, resistant to peeling and formation of mold. The wall covering system shall form a seal over the substrate to which it is applied and not allow the passage of substrate dust into the environment.

* 1. Submittal: Prior to the start of Work, submit to the Owner Consultant for approval, manufacturer’s descriptive literature, and two (2) 5-1/2 inch by 8 inch Samples of each wall covering system.

3. Install Encapsulation covering in accordance with manufacturer’s installation instructions and the following provisions:

a. Remove foreign material by washing surfaces with a detergent solution. Remove loose plaster, loose paint, and loose wallpaper. Utilize dust control methods described in this Specification.

b. Repair larger damaged areas flush with surrounding wall surfaces prior to installation of wall covering system.

J. Enclosure Procedures - Gypsum Wallboard (interior surfaces only), plywood paneling, other enclosures of exterior substrate:

1. Surface preparation: Remove foreign material by wash-down with a non-residue detergent solution. Remove loose plaster, loose paint, and loose wallpaper in accordance with this Specification to stabilize the painted surfaces.

* 1. Affix warning labels stating surface contains “LEAD-BASED PAINT” to the surface prior to being enclosed. Labels shall be 3” x 5” and placed four (4) foot apart at approximately five foot high on the surface being enclosed.
  2. Install selected enclosure material in accordance with the relevant section of the Specification. Any disturbance to Lead Based Paint in the execution of this section shall comply with the Lead Related Construction Work section of this Specification.

K. SOIL ABATEMENT

1. Surface Contamination:

a. Remove Lead Contaminated Soil from the location(s) and to a depth specified in the scope of Work.

b. In the absence of a specified depth of soil Removal identified in the scope of Work, submit, prior to the bid, a Request for Clarification regarding the quantity of soil to be removed.

c. Submit a written soil Abatement plan prior to initiation of the Project.

d. No soil Abatement shall proceed until the Work plan has written approval by the Owner Consultant.

e. Refer to the waste handling and transportation section of this Specification for the handling, characterization, and disposal of waste.

L. ALTERNATE PROCEDURES

1. If specified procedures cannot be utilized, a request must be made in writing to the Owner Consultant establishing details of the problem encountered and recommended alternatives.

2. Alternate procedures shall provide equivalent or greater protection than procedures that they replace.

3. Prior to implementation, all alternative procedures shall be submitted and approved in writing by the Owner Consultant.

M. CLEAN-UP PROCEDURES

1. During the entire process of the Work of this section, perform continuous cleaning of all debris generated using wet methods and/or HEPA filtered vacuuming.

2. At the completion of the Work of this section, clean all surfaces within the impacted Work Area, including but not limited to, all tools, equipment, and polyethylene sheeting to remove visible debris from the Work Area.

3. All tools and equipment utilized in the Work Area shall be thoroughly cleaned. All non-electrical tools and equipment shall be cleaned monthly and before Removal from the Work Area by HEPA vacuuming and washing using a lead specific detergent or other suitable cleaning agent.

4. Electrical tools and equipment shall be HEPA vacuumed and cleaned by wet wiping limiting the amount of water used to avoid electrical hazards.

5. Remove polyethylene sheeting, except for critical barriers, by folding it into itself beginning with the higher level polyethylene first.

6. Following Removal of polyethylene sheeting a final cleaning of all surfaces in the Abatement workspace shall be performed by HEPA vacuuming, wet wiping, and a final HEPA vacuuming.

7. When HEPA vacuums are utilized, vacuuming shall be performed from the top down and from the area of impact to the outer edge of the polyethylene sheeting.

* + - 1. Apply no less than one continuous coat of approved paint or primer to all abated surfaces, where applicable.
      2. At the completion of the final clean up, the DHS certified supervisor shall inspect the Work Area for visible debris. If debris is identified, repeat the final cleaning process.
      3. Wet wiping, washing, and cleaning required by this section shall include the Removal of all visible debris by cleaning with a lead specific detergent or other suitable cleaning agent in clean water followed by a rinsing with clean water and clean rags, following the same sequence of cleaning as the vacuuming.

11. Refer to the waste handling and transportation section of this Specification for disposal of waste generated by this process.

3.03 WASTE HANDLING AND TRANSPORTATION

A. Characterization of Waste:

1. Until analytical results are available, all waste materials (including water containing paint chips) shall be treated as hazardous. All visible paint chips shall be separated from waste water before characterization. Following removal of solids the waste water shall be characterized to determine disposal requirements. The paint chips removed from the waste water may be disposed of as assumed RCRA hazardous waste or characterized to determine disposal requirements.
2. Characterize all waste streams as follows:

a. Collect a representative sample of the waste material.

b. For a pile of waste take one sample of a proportionate combination of Component in the pile. If a large quantity of waste is generated no less than four samples may be required.

c. For large wood Component, such as windows, doors, etc., a representative sample of each Component of similar characteristics, paint history, etc., shall be collected and tested. A full depth core sample, not less than one (1) inch diameter, of the Component is to be collected. The core sample shall include the substrate and paint coatings on both sides of the Component, as applicable.

1. Analysis for the waste characterization samples shall be performed as follows:

a. Waste generated by chemical stripping shall, in addition to the requirements for determining the solid and soluble lead concentrations, shall be tested for corrosiveness and other contaminants, as applicable, resulting from the chemical stripping process.

b. Analyze samples for Total Threshold Limit Concentration (TTLC):

1) If results are less than 50 mg/kg (milligrams/kilogram) the waste is not hazardous and shall be disposed as general construction waste.

2) If sample results are 50 mg/kg or greater, the waste shall be tested for Soluble Threshold Limit Concentration (STLC).

c. Where waste is required to be tested for STLC the following shall apply:

1) If the STLC results is less than 5 mg/L (milligrams/liter) the material shall be disposed at a Class II waste landfill. Evidence of such results of the STLC testing will be required by the landfill before waste is accepted. No further testing is required.

2) If the STLC results are 5 mg/L or greater, the waste is a California regulated waste and the material shall be tested using the federally mandated Toxicity Characterization Leaching Procedure (TCLP).

1. Where waste is required to be tested by TCLP the following shall apply:

1) If the TCLP is less than 5 mg/L, the waste is a California regulated hazardous solid waste (non-RCRA). This material shall be disposed in a Class I hazardous waste landfill.

2) If the TCLP is equal to or greater than 5 mg/L, the waste is a federally regulated hazardous waste solid (RCRA). The waste shall then be disposed in a Class I hazardous waste landfill.

e. Personal and commercial wash water with lead contamination shall be handled as follows:

1) Filter the waste water through cheesecloth, or other similar filtering media, to remove the gross debris. Separate the waste streams and characterize these in compliance with this Specification.

2) If the waste water is identified as a RCRA or California regulated hazardous waste (Non-RCRA) by STLC and TCLP, filter the waste water by power pumping it through a 20 micron pore size filter. The filtered water shall be tested as described for waste in this Specification.

3) If test results categorize the filtered water as non-hazardous, it may be disposed of in the sewer system.

4) Wastewater, filtered or otherwise, shall not be discharged in storm drains, gutters or allowed to sheet flow over the surface of the ground.

B. Waste Handling:

1. All waste, hazardous and non-hazardous, shall be disposed of at an authorized site in accordance with all provisions of this Specification and applicable Federal, State, and local laws.
2. Any waste determined to be hazardous, through analytical testing, shall be kept in a secured area or lockable container that is inaccessible to all persons other than authorized personnel working on the Project. All hazardous waste containers shall be labeled “Hazardous-Waste – Contains Lead” and labeled with the date waste collection commenced.
3. Hazardous waste shall not remain on the Project site beyond 90 days of the date it was generated. It shall be removed from the Project site and transported to an approved landfill before the 90 days has elapsed.
4. Waste shall not be transported from the work are to the storage container or waste hauler’s vehicle while students or staff are present in the path of travel. Where a path of travel cannot be cordoned off the transportation of waste must be completed prior to of after students and staff are not on site.
5. Once hazardous waste is removed from the Project site, ensure it is disposed of in an approved landfill within 6 days. The waste shall not be transported to another site for commingling of waste from a source other than the site of original generation. This requirement shall be documented by the proper execution of a Uniform Hazardous Waste Manifest signed by the landfill operator.
6. All hazardous and non-hazardous waste shall be kept in different containers and stored in separate locations. Commingling of waste is not permitted.
7. As the Work progresses, to prevent exceeding available storage capacity on the Project site, sealed and labeled containers of lead waste shall be removed and transported to the prearranged disposal location.
8. Containers used for hazardous waste shall meet the requirements of EPA and DOT for hazardous waste storage and transport. At a minimum, disposal packaging of Lead Based Paint fragments, dust, and debris shall be in 6-mil polyethylene (plastic) bags that are airtight and puncture resistant.
9. Any debris or residue observed on containers or surfaces outside of the Work Area resulting from clean up or disposal activities shall immediately be cleaned using HEPA filtered vacuum equipment and/or wet methods as appropriate.
10. Materials not contained in bags or other appropriate disposal containers shall not be placed in lead waste storage containers, nor shall storage containers be used for non-lead waste. To avoid damage, all packaged waste shall be placed, not thrown, into the storage containers.

11. Lead Contaminated Soil shall be transported in plastic lined containers.

C. Transportation of Non-Hazardous Waste:

1. All receipts from the disposal facility, trip tickets, transportation manifests, weight certificates or other documentation of disposal shall be delivered to the Owner Consultant within 48 hours of disposal. The waste manifest shall be signed by the generator, the transporter(s), and the disposal site operator each time the responsibility for the waste material is transferred. If a separate hauler is employed, the name, address, and signature of the transporter shall also appear on the manifest.

D. Transportation of Hazardous Waste:

1. All hazardous waste shall be transported by a RCRA/DOT/EPA certified hazardous waste transporter. Provide evidence that the hazardous waste transporter meets the requirements of this Specification.

2. The Work of this section includes responsibility for all actions of the hazardous waste transporter as it pertains to waste Removal and disposal related to the Work of this Specification.

3. Identify the facility to which the waste generated by this Specification will be taken. Evidence shall be provided verifying the facility is licensed/permitted to receive and handle non-hazardous lead containing waste and/or hazardous lead containing waste as applicable.

4. All waste disposed as hazardous shall be transported under a Uniform Hazardous Waste Manifest. The generator copy of this manifest shall be submitted to the Owner Consultant within five (5) days of transport.

5. All dump receipts, trip tickets, transportation manifests, weight certificates or other documentation of disposal shall be delivered to the Owner Consultant within 48 hours of disposal. The Uniform Hazardous Waste Manifest shall be signed by the generator (or designee), the transporter(s), and the disposal site operator each time the responsibility for the waste material is transferred. If a separate hauler is employed, the name, address, U.S.E.P.A. ID number and signature of the transporter shall also appear on the manifest.

6. The enclosed cargo area of trucks or containers shall be free of debris and lined with 6-mil polyethylene sheeting to prevent contamination from leaking or spilled containers. Floor sheeting shall be installed first and extend up the walls. Wall sheeting shall be overlapped and taped into place.

7. During transport, drums and other containers shall be placed on level surfaces in the cargo area and packed tightly together to prevent shifting and tipping. Large structural Component shall be secured to prevent shifting and bags placed on top.

3.04 MONITORING

A. Project Management and Inspection:

1. Owner has the right to perform air, wipe, and visual monitoring at any time.

2. Owner shall proceed in accordance with the terms and conditions of the Contract Documents whenever the Work or protective measures are not in compliance with applicable governmental regulations, Contract requirements, and/or threatens the adjoining environment with lead contamination.

3. Where exposure monitoring indicates exposure is at or above the P.E.L., comply with Title 8, CCR Section 1532.1 (e) through (n).

B. Employee – Personal Air Monitoring:

1. Provide air monitoring as required by Title 8 CCR, Section 1532.1. Results shall be provided within ten working days of sampling. If the intent is to utilize such as exposure assessment documentation, and Work is to commence earlier than ten working days, submit results 24 hours in advance of the start of Work.

C. Clearance Inspection:

1. Clearance Inspection for Lead Related Construction Work shall include:

a. A visual inspection of the Work Area by the Owner Consultant prior to occupancy for normal activity.

b. Do not remove barriers designating a regulated Work Area until a written release from the Owner Consultant is provided.

c. The Owner Consultant has the right to collect wipe samples as part of the Clearance Inspection.

2. Clearance Inspection for Abatement shall include:

a. A visual inspection of the Work Area by the Owner Consultant prior to collection of environmental samples (dust, wipe, and/or soil samples, as applicable).

b. Owner Consultant shall collect environmental samples.

c. Results of samples shall comply with Title 17, CCR before the Work Area is released for normal occupancy.

1. Where samples fail to meet regulated clearance levels of Title 17, CCR, clean the Work Area as required for final cleaning in the Clean Up Procedures section of this Specification.

e. Following cleaning, the visual inspection and environmental sampling will be repeated as described above. This process shall continue until the clearance level of Title 17, CCR is provided.

3.05 RE-ESTABLISHMENT OF THE WORK AREA AND SYSTEMS

A. Re-establishment of the Work Area shall only occur following the completion of clean-up procedures and after a Clearance Inspection has been performed and documented to the satisfaction of the Owner Consultant.

B. Re-secure Moveable Objects removed from their former positions during area preparation activities.

C. Relocate Moveable Objects that were removed to temporary locations back to their original positions.

1. Reestablish HVAC, mechanical and electrical systems to the condition prior to commencement of the Project.

E. Repair all areas of damage that occurred as a result of Abatement or Lead Related Construction Work.

3.06 PROJECT COMPLETION DOCUMENTATION

A. Provide to the Owner Consultant all of the following close-out documentation:

1. Filter change logs for all air filtration units, water filtration units and respirators

2. Foreman's daily job reports

3. Employee entry/exit logs for all Work Areas

4. Visitor entry/exit logs for all Work Area

5. Air sample results for personnel

6. Copies of all hazardous and non-hazardous waste manifest

7. All hazardous waste weight tickets

8. Analytical data and chain of custody for waste characterization

9. All signed Daily Personnel Report Forms

B. Provide Owner Consultant with as-built drawings identifying surfaces where Lead Based Paint has been encapsulated or enclosed.

END OF SECTION