HENRY+ ASSOCIATES ARCHITECTS
730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

May 15, 2020

Henry + Associates Project No. 19-32-050
DSA File No. 39-50
DSA Application No. 02-118041

ADDENDUM NO. 01

Kitchen Renovation Houston School
Lodi Unified School District
Lodi, California

Henry + Associates

1. ALL WORKMANSHIP, MATERIALS, APPLIANCES AND EQUIPMENT which may be included in the following items shall be the same relative quality as described for similar work set forth in the original or main specifications of which these Addendum items shall be considered a part.

2. ADDENDUM DRAWINGS (included in the back of this Addendum).
The following Addendum drawings modify or supplement the issued bid documents:

   None

3. PROJECT MANUAL:

   A. Add the following specification section attached to this addendum to the project manual:

      1. Limited Asbestos and Lead Abatement Specifications.

4. DRAWINGS:

   A. Drawing A2.2, Enlarged Floor Plan

      1. Add note: “Construct a temporary wood framed partition wall from floor to ceiling approximately 6’ inside MP Room to separate work of Kitchen from MP room. Maintain access to exits from MP Room side. The MP room will be occupied by students and teachers during lunch and periodically beginning in August, 2020. Contractor will be required to accommodate partial owner occupancy of MP room for the remainder of the construction period.”

5. OTHER:

   A. The Pre-Bid Sign-In sheet is attached to the back of this addendum.

* * * END OF ADDENDUM * * *

Limited Asbestos and Lead Abatement Specifications

Houston School - Multipurpose Building Kitchen
4600 East Acampo Road
Acampo, California

May 7, 2020

Terracon Project No. R1207078

Prepared for:
Lodi Unified School District
Lodi, California

Prepared by:
Terracon Consultants, Inc.
Emeryville, CA

Prepared by: William Frieszell
Senior Industrial Hygienist
CAC #12-4853

Reviewed by: Steff Steiner
Office Manager
CAC #92-0850

ASBESTOS AND LEAD WORK PRACTICES AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

A. The general scope of work includes limited Class II & III Asbestos Operations to be undertaken during the renovation of kitchen areas of the Multipuspose Building, comprising a portion of the Houston Middle School campus located at 4600 East Acampo Road in Acampo, California.

B. It should be noted that penetrations or similar small-scale impacts to materials are also anticipated (Particularly at roof level) and are covered by this specification. The contractor shall interface with the architect in order to identify these locations prior to submitting a bid.

C. In addition, white painted surfaces and grey ceramic tile glazing compounds have been sampled and confirmed to contain lead. Based on the age of the referenced campus, all work impacting lead-containing materials must be conducted in accordance with the OSHA Lead in Construction standard 8 CCR 1532.1.

D. The Contractor is responsible for conducting a thorough site visit and for reviewing the information in this specification as well as reviewing application local, state and federal regulations as they pertain to hazardous materials related activities.

1.2 COMPLIANCE AND INTENT

A. This document will not apply to activities requiring damage to either thermal systems insulation (TSI) or surfacing materials as defined by the California Division of Occupational Safety and Health (Cal-OSHA), which are not known to exist within the project area.

B. The Contractor is responsible for repair, to the satisfaction of the District, of surfaces not scheduled for demolition that become damaged as a result of abatement or demolition activities. All unscheduled repair work shall be at no increase to contract price.

C. This project involves impacts and/or demolition to known asbestos and lead containing materials within the interiors and exteriors areas of the affected site. During all work, provide monitoring and worker protective equipment in accordance with Cal-OSHA and as required by this specification. Where there is conflict, the most stringent requirement shall apply.

D. The work covered by this specification includes the limited handling, removal, and proper disposal of asbestos-containing materials (ACMs) and limited lead containing materials. All hazardous materials shall be removed and disposed of according to all federal, state and local regulations. The Contractor shall determine if additional hazardous materials will be impacted by the scope of the hazardous materials related work activities.

E. During the performance of Class III contractor assist activities, the abatement workers shall receive EPA-accredited training and be certified for asbestos

abatement work. For the purposes of this project, all workers shall receive at least 16 hours of training and shall be supervised by a competent person holding current accreditation as an AHERA Contractor Supervisor. Any contractors involved in the demolition of surfaces containing lead shall conduct all work in accordance with Cal-OSHA's lead construction standard, Title 8 CCR 1532.1.

F. All employees engaged in Class II abatement of wall systems and select roofing demolitions/penetratons shall receive at least 40 hours of EPA-accredited worker training and shall be certified for asbestos abatement work. These activities shall be supervised by a competent person holding current accreditation as an AHERA Contractor Supervisor.

G. Furnish all labor, materials, facilities, equipment, services, employee training, medical monitoring, permits and agreements necessary to perform the work required for asbestos and lead related work in accordance with this document.

H. Comply with all federal, state, and local regulations pertaining to asbestos and lead removal, storage, transportation and disposal; employee heath and safety; Contractor certifications; and all licenses, permits, and training.

I. Work on all affected premises shall be confined to areas designated in the Contract Documents. Materials and equipment shall be stored within areas designated by the District. Should additional space be required, the Contractor shall request permission for additional space and shall adequately safeguard occupants from associated health and safety hazards.

J. Perform all work specified herein with competent persons trained, knowledgeable and qualified in state-of-the-art techniques relating to asbestos and lead abatement, handling, and the subsequent cleaning of contaminated areas.

K. During removal activities, the Contractor shall protect against contamination of soil, water, plant life, sensitive building finishes, adjacent building areas, and shall ensure that there is no airborne release of dusts. The District may collect air samples in the building and in adjacent areas to evaluate the Contractor's performance. Evidence of settled dust or airborne levels of contaminants above background will require the implementation of additional controls at no increase to contract price.

L. It is the Contractor's responsibility to determine the quantities of ACMs and lead materials and surfaces that will require removal or other impact prior to commencement of the project. The Contractor shall conduct a site visit to determine exact locations of materials that will require abatement. Should abatement of any scale be required in order to complete the project, the contractor shall utilize an appropriately accredited and licensed asbestos abatement firm to complete required activities.

M. This section provides appropriate protocols for handling and disposal of asbestos and lead containing materials. If additional suspect ACMs are discovered during the course of the construction, immediately notify the District and/or the District's Environmental Consultant.

N. Asbestos and lead containing materials removed during the construction activities shall be disposed of in an approved manner complying with all applicable federal, state, and local regulations. Appropriate waste manifests or letters of salvage shall be furnished to the District thereby limiting the District's liability for improperly salvaged items. Materials are conveyed to the Contractor "as is," without any warranty, expressed or implied, including but not limited to, any warranty to marketability or fitness for a particular purpose, or any purpose.

1.3 DEFINITIONS

A. The following definitions pertain to work of this section.

1. Abatement: Process of controlling fiber release from ACMs including encapsulation, enclosure, controlled renovation procedures, removal, clean-up and disposal.

2. ACM: Asbestos-containing material

3. Action Level - Lead: Employee exposure without regard to the use of respirators, to an airborne concentration of 30 micrograms per cubic meter of air (30 g/m3) calculated as an 8-hour time-weighted average (TWA).

4. Activity Class/Category - Lead: The designation assigned to work activities specified for removal of lead by pressure blasting, grinding, scraping, needle-gunning, chiseling, hammering, or wire brushing. Activity Classes I through III determine the minimum surveillance measures and exposure controls of the Contractor(s).

5. Aggressive Sampling: Air sampling either during or following the agitation of the air.

6. AHERA: Asbestos Hazard Emergency Response Act (40 CFR Part 763).

7. Airlock: A system for permitting ingress and egress with minimum air movement between a contaminated area and uncontaminated areas. Typically consists of two curtained or gasketed doorways separated by a distance of at least six feet such that one passes through one doorway into the airlock, allowing the doorway to close off the opening. This airlock must be maintained in uncontaminated condition at all times.

8. Ambient Air Quality: The quality of air (in terms of airborne fiber/lead content) that is present in a given space.

9. Area Monitoring: Sampling of airborne asbestos fiber/lead concentrations within the work area and outside the work area. Sampling shall represent airborne concentrations that may reach the breathing zone.

10. Asbestos Fibers: Refers to asbestos fibers having an aspect ratio of 3:1, and those fibers longer than five (5) microns.

11. Asbestos Permissible Exposure Limit (PEL): A level of airborne fibers specified by OSHA as an occupational exposure standard for asbestos. This level represents the 8-hour time-weighted average of 0.1 fibers per cubic centimeter of air as measured by Phase Contrast Microscopy (PCM) analytical method.

12. Asbestos-Containing Material (ACM): Those manufactured products and construction materials including structural and mechanical building materials, as well as packings and gaskets that contain more than one percent (1.0%) asbestos by weight.

13. Asbestos: Asbestos includes asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-gunerite (amosite), anthophylite, tremolite, and actinolite. For the purposes of determining worker respiratory protection, both the asbestiform and non-asbestiform of the above minerals, and any chemically treated or altered materials shall be considered as asbestos.

14. Authorized Visitor: Designated employees or consultants for the District and representatives of any federal, state or local regulatory or other agency having jurisdiction over the project.

15. Baseline: Refers to the background levels of asbestos monitored before abatement.

16. Breathing Zone: A hemisphere forward of the shoulders and head with a radius of approximately six to nine inches.

17. Breach: A rift or gap in the critical or secondary barriers that allow egress of air from the containment to outside, or vice versa.

18. Bridging Encapsulant: An encapsulant that forms a discrete layer on the surface of an in-situ asbestos matrix.

19. Cal-OSHA: State of California, Occupational Safety & Health Administration.

20. CDPH: California Department of Public Health

21. Chain-of-Custody: A legal concept involving documentation of the physical possession of a sample(s) from the moment it is collected, transported, analyzed, and ultimately stored in an archive.

22. Change Rooms: Refers to the two chambers in the decontamination area used to change into and out of protective clothing.

23. Certified Industrial Hygienist (CIH): A person certified by the American Board of Industrial Hygiene.

24. Clean Room: An uncontaminated area or room that is part of the worker decontamination enclosure system, with provisions for storage of workers' street clothes and protective equipment.

25. Clearance Level: Clearance level for samples analyzed by PCM will be less than 0.01 fibers per cubic centimeter of air and for TEM will be less than 70 structures per square millimeter (<70 s/mm^2). Samples may be collected by aggressive or non-aggressive sampling methods and the minimum air volume shall be 1,200 liters.

26. Competent Person: One who is capable of identifying existing and predictable hazards and who has the authority to take prompt corrective measures to eliminate them.

27. Critical Barrier: A unit of temporary construction that provides the only separation between asbestos work area and an adjacent potential occupied space. This includes the decontamination unit, perimeter walls, ceilings, penetrations and any temporary critical barriers between the work area and the uncontaminated environment.

28. CSLB: Contractors State Licensing Board

29. Decontamination Area: Area which is constructed to provide the means for workers to store clothing, equipment and other articles, and to properly remove contamination upon concluding work activities that result in exposure to these hazardous materials.

30. DOP: Dioctylphthalate, the challenge aerosol used to perform on-site leak testing of HEPA filtration equipment.

31. DOT: Federal Department of Transportation.

32. DOSH: Division of Occupational Safety & Health (see also Cal-OSHA)

33. Decontamination Unit: Refers to system of airlocks used to decontaminate personnel, waste bags, equipment, etc. when exiting the work area. A decontamination unit shall be set up for each containment area.

34. Demolition: The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

35. Disposal Bag: Minimum six (6) mil thick leak-tight plastic bags used for transporting asbestos waste from a work area to disposal or shipping container. Each disposal bag must have required labels per Title 8 CCR 1529 (Cal-OSHA asbestos rule), 5194 (HAZCOM). RACM waste must be additionally labeled according to 49 CFR 171-179 (USDOT), and 40 CFR 61 Subpart M (NESHAP). Hazardous waste disposal bags must be labeled with generator's name, address, site location, generator number, and the following information:

CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
AVOID BREATHING AIRBORNE ASBESTOS
RQ WASTE ASBESTOS, 9 NA 2212 PG III
(Class 9 placard)
HAZARDOUS WASTE
STATE AND FEDERAL LAW
PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST
POLICE OR PUBLIC SAFETY
AUTHORITY OR THE CALIFORNIA
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

36. District: Lodi Unified School District

37. District's Environmental Consultant: Environmental Consulting firm and its representatives retained to provide compliance oversight and monitoring for the Contractor's asbestos abatement work activities.

38. Encapsulant: A liquid material that can be applied to ACMs that controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging) or by penetrating into the material and binding its components together (penetrating encapsulant).

39. Encapsulation: A specified procedure necessary to coat ACMs or asbestos contaminated surfaces with an encapsulant to control the possible release of asbestos fibers into the ambient air.

40. Enclosure: The construction of an airtight, impermeable, permanent barrier surrounding the ACM to prevent the release of asbestos fibers into the air.

41. Equipment Decontamination Enclosure System: A decontamination enclosure system for materials and equipment, typically in a designated area of the work area, and including a washroom, a holding area, and an uncontaminated area.

42. 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. The equipment room shall be kept clean from asbestos-containing debris at all times.

43. Excursion Limit: A California Code of Regulations (Title 8 CCR 1529) requirement that ensures no employee exposed to airborne concentrations of asbestos in excess of 1.0 fibers per cubic centimeter of air as averaged over a sampling period of thirty (30) minutes.

44. Filter: A media component used in respirators to remove solid or liquid particles from the inspired air.

45. Fixed Object: A unit of equipment or furniture in the work area that cannot be removed from the work area.

46. Friable Asbestos-Containing Material: Material that contains more than 1.0% asbestos by weight, and that can be crumbled, pulverized or reduced to powder by hand pressure when dry.

47. Foreman: An individual who typically fulfills the duties of “competent person” as defined by Title 8 CCR 1529. This individual must supply documentation of a passing grade in a Cal-OSHA accredited course in Asbestos Contractor/Supervisor training. The foreman must be on-site during all abatement work.

48. Glove Bag: A polyethylene bag with two inward projecting long sleeve gloves, designed to enclose an object from which an ACM is to be removed. Bags shall be seamless at the bottom, have a minimum thickness of 6 mils, and shall be labeled appropriately.

49. Glove Bag Technique: A method for removing ACM from heating, ventilation and air conditioning (HVAC) ducts, piping runs, valves, joints, elbows, and other non-planar surfaces. The glove bag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains

all asbestos fibers released during the process. Secondary containment shall be provided for all glove bag work unless otherwise noted.

50. Gross or Full Abatement: Designated rooms, spaces, or areas of the project that have been totally sealed, contained in polyethylene, equipped with decontamination enclosure systems, and placed under negative pressure.

51. HEPA: High Efficiency Particulate Air filter capable of filtering out airborne particulate 0.3 microns or greater in diameter at 99.97 percent efficiency.

52. Lead: Toxic metallic element of atomic number 82, or any other materials, substances or compounds that may contain lead. Note for metal painted surfaces lead is often found in combination with chromates. For the purposes of this specification, lead also refers to lead-chromate paints.

53. Lead Hazardous Waste: Paint, sludge, debris or cleaning materials are to be treated as a hazardous waste if laboratory results indicate a lead (Pb) concentration of 5 milligrams per liter (mg/l) or greater using the EPA approved Toxicity Characteristic Leaching Procedure (TCLP) test. The waste will also be classified as hazardous waste if the Total Threshold Limit Concentration (TTLC) of measured lead is greater than 350 mg/kg or if the Soluble Threshold Limit Concentration (STLC) of measured lead is greater than or equal to 5 mg/l.

54. Manifest: The document authorized by both Federal and State authorities for tracking the movement of ACMs.

55. Movable Object: A unit of equipment or furniture in the work area that can be removed from the work area (e.g., smoke detectors, lights, etc.)

56. Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere, and negative during inhalation in relation to the air pressure of the outside atmosphere.

57. Negative Pressure: Air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).

58. NESHAP: National Emission Standard for Hazardous Air Pollutants – EPA Regulation 40 CFR Subpart M, Part 61.

59. NIOSH: National Institute for Occupational Safety and Health: Sets test standards, analytical methods, and certifies performance of various respirator designs (research institute within Federal OSHA).

60. NIST: National Institute of Standards and Technology: Administers the NVLAP Program.

61. NOA – Naturally Occurring Asbestos. Found in soil, fill and concrete.

62. NVLAP: National Voluntary Laboratory Accreditation Program – evaluates and certifies laboratories doing PLM and TEM analyses.

63. Passive Sampling: Refers to air sampling with no air agitation.

64. Permissible Exposure Limits (PELs) - Asbestos: A level of airborne fibers specified by OSHA as an occupational exposure standard for asbestos. This

level represents the 8-hour time-weighted average of 0.1 fibers per cubic centimeter of air and 30-minute excursion limit of 1.0 fibers per cubic centimeter of air as measured by Phase Contrast Microscopy (PCM) analytical method.

65. Permissible Exposure Level (PEL) - Lead: An eight-hour time weighted average concentration of 50 micrograms of lead per cubic meter of air (50 µg/m3).

66. Personal Monitoring: Sampling for asbestos and lead concentrations within the breathing zone of an employee.

67. Phase Contrast Microscopy (PCM): Technique using a light microscope equipped to provide enhanced contrast between the fibers and the background. Filters are cleared with a chemical solution and viewed through the microscope at a magnification of approximately 400X. This method does not distinguish between fiber types and only counts those fibers longer than 5 microns and wider than approximately 0.25 microns. Because of these limitations, fiber counts by PCM typically provide only an index of the total concentration of airborne asbestos in the environment monitored.

68. Polarized Light Microscopy (PLM): An optical microscope technique used to identify asbestos content and distinguish between different types of asbestos fibers by their shape and unique optical properties.

69. Powered Air Purifying Respirator (PAPR): A full facepiece respirator that has the breathing air powered to the wearer after it has been purified through a filter.

70. Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.

71. Remodel: Replacement or improvement of an existing building or potion thereof where exposure to airborne asbestos may result. Remodel includes, but is not limited to, installation of materials, demolition, cutting, patching, and removal of building materials.

72. Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.

73. Soluble Threshold Limit Concentration (STLC): A material is considered as hazardous waste if laboratory test result indicate Soluble Threshold Limit Concentration of measured lead are greater than or equal to 5 milligrams per liter (mg/l).

74. Shower Room: A room between the clean room and the equipment room in the work decontamination enclosure system. This room contains hot and cold or warm running water and soap suitably arranged for complete showering during decontamination. The shower room comprises an airlock between contaminated and clean areas.

75. Surfactant: A chemical wetting agent added to water to improve penetration, this reducing the quantity of water required for a given operation or area.

76. Transmission Electron Microscopy (TEM): Asbestos structure analysis for a specified volume of air. TEM is a technique that focuses an electron beam onto a thin sample. As the beams transmits through certain areas of the sample, an image resulting from varying densities of the sample is projected onto a fluorescent screen. TEM is the state-of-the-art analytical method for identifying asbestos fibers collected in air samples in non-industrial settings. TEM microscopes equipped with selected area electron diffraction (SAED) capabilities also can provide information on the crystal structure of an individual particle.

77. Toxicity Characteristic Leaching Procedure (TCLP): Test developed by U.S. Environmental Protection Agency (USEPA) to simulate landfill conditions and the potential for a waste to leach hazardous materials (40 CFR 261 - Appendix 2).

78. Total Threshold Limit Concentration (TTLC): A material is considered as hazardous waste if laboratory test result indicate Total Threshold Limit Concentration of measured lead are greater than or equal to 350 milligrams per kilogram (mg/kg).

79. TSI: Thermal Systems Insulation

80. Visible Emissions: Any emission containing particulate material that is visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

81. Visual Inspection: A visual inspection by District's Environmental Consultant, of the work area under adequate lighting to ensure that the work area is free of visible PCB material, debris, and dust.

82. Washroom: A room between the work area and the holding area in the equipment decontamination enclosure system equipped with water for decontamination of equipment and sealed waste containers. The washroom or shower room comprises one airlock.

83. Water Filtration: Refers to water filtration to as small a particulate size as technically feasible, but not more than 5 microns.

84. Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, HEPA vacuuming, or other cleaning utensils dampened with amended water and afterward thoroughly decontaminated or disposed of as asbestos contaminated waste.

85. Work Area: The area where asbestos removal is performed and that is defined or isolated to prevent the spread of asbestos fibers, dust or debris, and entry by unauthorized personnel. Work area is a regulated area as defined by Title 8 CCR 1529.

86. Zinc Protoporphyrin (ZPP) Test: Biological test for lead exposure that measures the amount of zinc protoporphyrin in blood.

1.4 SCOPE OF WORK

A. Provide the removal of ACMs as specified in this section. Reference all other sections of the Specifications and other documents included in the contract documents for information and requirements that affect the work of this Section.

B. Table I below provides estimated quantities of ACMs requiring removal. A 10% variance of quantity of actual ACM shown in the Table and estimated ACM is not considered a changed condition. The Contractor is responsible for field verifying quantities of ACMs and difficulty in abating the same. In the event that the contractor disagrees with the quantity provided, they shall submit their own estmates in writing prior to completion of the bidding phase. Please see attached laboratory data for other non-ACMs known to exist within affected areas.

Table I: Asbestos Containing Materials

Material Description	General Material Locations	Waste Category	Asbestos Type	Estimated Quantity
Interior Wall System - Drywall with Joint Compound	Material is Limited to Various Walls/Ceiling Systems within the Kitchen Area and Adjacent Spaces	Not Applicable	Drywall: None Detected Joint Compound: 2% Chrysotile Asbestos	4,000 sf
Roofing Field Systems - White TPO Material over Original Asphaltic Roof Systems	Material is Present throughout Roofing Field above Affected Kitchen and Adjacent Areas	Category I Non-Friable	TPO: None Detected Asphaltic Roofing: 20% Chrysotile Asbestos	To be Coordinated with Architect (Limited Penetrations Only)

C. Table II below provides a listing of lead samples that have been collected throughout the affected building. Due to the levels of lead confirmed within sampled paints, as well as the age of the affected structure, all painted surfaces should be assumed to contain lead content.

Table II: Lead Containing Materials

Material Description	General Sample Locations	Lead Concentration
Pb-01: White Paint on Plaster Wall Systems	Multipurpose Building at Kitchen Area	370 Parts Per Million
Pb-02: White Paint on Drywall Wall System	Multipurpose Building at Kitchen Storage Area	Not Detected <40 Parts Per Million
Pb-03: Grey Glazing Compound on 2" Ceramic Floor Tile System	Multipurpose Building at Kitchen Restroom Area	Not Detected <39 Parts Per Million

Material Description	General Sample Locations	Lead Concentration
Pb-04: Grey Glazing Compound on 6" Ceramic Wall Trim Tile System	Multipurpose Building at Kitchen Restroom Area	68 Parts Per Million

D. By submitting a bid, the contractor certifies that they have appropriate training and expertise to conduct all Class II/III asbestos work activities that will be required as a part of this job, or that they are securing an appropriate abatement contractor to perform contractor assist work for the duration of this project.

E. All waste generated during this project is assumed to be hazardous. The contractor is responsible for the profiling and final disposal of all waste streams.

F. In the absence of pre-existing data, the selected contractor is responsible for performing initial exposure assessments for lead related construction activities and negative exposure assessments for all asbestos related activities. This shall be performed using air monitoring and analysis techniques as specified by the National Institute of Occupational Safety and Health (NIOSH).

1.5 REFERENCES

The publications listed below form a part of this specification by reference. The publications are referred to in the text by basic designation only. If there is a conflict between any of the listed regulations or standards, then the most stringent or restrictive shall apply.

A. American National Standards Institute (ANSI) and American Society for Testing and Materials (ASTM)

1. ANSI Z9.2, 1979 (R 1991), Fundamentals Governing the Design and Operation of Local Exhaust Systems
2. ANSI Z87.1, 2003, Occupational and Educational Eye and Face Protection
3. ANSI Z88.2 1992, Respiratory Protection
4. ANSI Z89.1, 1986, Requirements for Protective Headgear for Industrial Workers
5. ANSI Z41, 1999, Personal Protection – Protective Footwear
6. ANSI Z88.6, 1984, Respiratory Protection – Respiratory Use Physical Qualifications for Personnel
7. ASTM C 732, 1982 (R 1987) Aging Effects of Artificial Weathering on Latex Sealants
8. ASTM D 522, 1993 (Rev. A) Mandrel Bend Test of Attached Organic Coatings
9. ASTM D 1331, Solutions of Surface-Active Agents
10. ASTM D 2794, 1993 Resistance of Coatings to the Effects of Rapid Deformation (Impact)
11. ASTM E 84, 1991 (Rev. A) Surface Burning Characteristics of Building Materials
12. ASTM E 96, 1994 Water Vapor Transmission of Materials

13. ASTM E 119, 1988 Fire Tests of Building Construction and Materials
14. ASTM E 736, 1992 Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members
15. ASTM E849, 1986 Safety and Health Requirement Relating to Occupational Exposure to Asbestos
16. ASTM E 1368, 1990 Visual Inspection of Asbestos Abatement Projects
17. ASTM E1494, 1992 Specifications for Encapsulants for Friable Asbestos-Containing Building Materials

B. California Assembly Bills (CAB)
1. CAB 040, Yearly Registration of Contractors

C. California Code of Regulations (CCR)
1. Title 8 CCR 5208, General Industry – Asbestos
2. CCR CARS, Carcinogen and Asbestos Registration Sections 340-344.53, 341.6 Amended, and 341.9 Amended Through 341.14
3. CCR ESO, Electrical Safety Orders, Chapter 4, Subchapter 5
4. CCR 1523, Illumination
5. CCR 1529, Asbestos in the Construction Industry
6. CCR 1531, Construction Respiratory Protective Equipment
7. CCR 1532.1, Lead in Construction
8. CCR 3203, Injury and Illness Prevention Program
9. CCR 3204, Access to Employee Exposure and Medical Records
10. CCR 3220, Emergency Action Plan
11. CCR 3221, Fire Prevention Plan
12. CCR 5144, Respiratory Protection Equipment Standard
13. CCR 5194, Hazard Communication Standard
14. CCR 6003, Accident Prevention Signs
15. Title 22, Division 4, Minimum Standards for Management of Hazardous and Extremely Hazardous Waste

D. California Health Services (CHS) Titles 22 and 23, California Administrative Code Disposal Requirements
1. CHS 25123, Section 25123
2. CHS 25124, Section 25124
3. CHS 25143, Section 25143
4. CHS 25163, Section 25163
5. CHS 66508, Section 66508
6. CHS 66510, Section 66510
7. CHS DIV 4, Division 4, Commencing with Section 66000, "Disposal"

E. California Health and Safety Code (CHSC)

1. CHSC 20, Division 20, Commencing with Section 24200

F. California Labor Code (CLC)
   1. CLC DIVISION 5, Part 1, commencing with 6300

G. California Propositions (CP)
   1. CP 65, Proposition 65

H. California State Board of Equalization (CSBE)
   1. CSBE ETU, Excise Tax Unit

I. California State License Board (CSLB)
   1. CSLB CBPC, California Business and Professional Code Sections 7058.5 and 7058.7, "Certification"

J. Code of Federal Regulations (CFR)
   1. 29 CFR 1910.134, Respiratory Protection
   2. 29 CFR 1910.141, Sanitation
   3. 29 CFR 1910.145, Accident Prevention Signs and Tags
   4. 29 CFR 1926.21, Safety Training and Education
   5. 29 CFR 1926.55, Gases, Vapors, Fumes, Dusts, and Mists
   6. 29 CFR 1926.62, Lead Exposure in Construction
   7. 29 CFR 1926.65, Hazardous Waste Operations and Emergency Response
   8. 29 CFR 1926.59, Hazard Communication
   9. 29 CFR 1910.1000, Air Contaminants
   10. 29 CFR 1926.1101, Asbestos
   11. 40 CFR 61-SUBPART A, General Provisions
   12. 40 CFR 61-SUBPART M, National Emission Standard for Asbestos
   13. 40 CFR 260, Hazardous Waste Management Systems: General
   14. 40 CFR 745, Lead; Requirements for Lead-Based Paint Activities
   15. 40 CFR 763, Asbestos Containing Material in Schools
   16. 49 CFR 178, Shipping Container Specifications

K. National Fire Protection Association (NFPA)
   1. Standard 10, Fire Extinguishers
   2. Standard 70, National Electric Code
   3. Standard 701, Small Scale Fire Test for Flame Resistant Textiles

L. State and Local Regulations
   1. Rule 4002, San Joaquin Valley Air Pollution Control District

M. U.S Department of Housing and Urban Development (HUD)

1. Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing

N. Underwriters Laboratories, Inc. (UL)

1. UL 586-96, 1996 Test Performance of High-Efficiency Particulate Air Filter Units

1.6 SUBMITTALS PRIOR TO START OF WORK

A. The reviews by the District or District's Environmental Consultant are intended to be only for general conformance with the requirements. The District or District's Environmental Consultant assumes no responsibility for permits, licenses, notices, materials and methods, equipment or temporary construction required to execute the work described in this Section of the Specification or in other Sections of the Specification or in other documents included in the contract documents.

B. Before commencing work involving the abatement of asbestos, submit the following for review by the District or District's Environmental Consultant.

1. A detailed work plan outlining the techniques and equipment to be used in order to prevent contamination of District Property.
2. Provide an asbestos and lead site safety plan prior to project initiation. The site safety plan shall deal with, at a minimum: site safety and health hazards; fiber release incidents; control of water leakage or discharge within and/or from the work area; medical emergency; asbestos handling procedures; fall protection; electrical safety; Contractor's internal administrative and inspection procedures; earthquakes and/or fire emergency procedures; protocol for responding to complaints or questions from interested parties; 24-hour emergency telephone numbers for company officers with authority to respond to emergencies.
3. DOP testing certification for all high efficiency particulate air filtration devices to be used during the performance of site activities.
4. Competent Person (as defined by Title 8 CCR 1529): Demonstrate education and specialized training with successful completion of a Cal-OSHA accredited asbestos training course along with CDPH accredited lead training.
5. Submit current certificates (less than 11 months) signed by each employee and trainer that the employee has received proper training in the handling of materials that contain asbestos and/or lead Include documentation showing that the worker understands the following; health implications and risks involved (including the illnesses possible from exposure to airborne asbestos fibers), the use and limits of the respiratory equipment to be used, and the results of monitoring of airborne quantities of asbestos concerning health and respiratory equipment.
6. Proof of Respirator Fit Testing: Provide proof of respirator fit testing. Fit testing records must be less than eleven (11) months old and document testing on the type of respiratory protective equipment used for this project. Fit testing records must be signed by the Competent Person.
7. Foreman Training: Submit evidence that the foreman to be used on the job fulfills the qualifications detailed in this specification and has experience in similar jobs.

8. Medical Examinations: Submit evidence signed by a physician that each employee used on the job has received an appropriate medical examination as detailed in Title 8 CCR 1529 and 1532.1. The submitted document must be less than eleven (11) months old.
9. Rental Equipment: When rental equipment is to be used in the abatement areas or to transport hazardous waste, the Contractor shall provide written notification regarding intended use of the rental equipment to the rental agency before use, with copies to the District's Environmental Consultant.
10. Certificates of Compliance: Submit manufacturer's certification that vacuums, ventilation equipment, and other equipment required to contain airborne asbestos fibers conform to ANSI Z9.2. Submit results of onsite DOP testing of all HEPA-filtered ventilation equipment.
11. Licenses: Submit copies of state and local licenses, evidence of Cal-OSHA registration and permits necessary to carry out the work of this contract.
12. Notification of Other Contractors: If other contractors are working at the job site, before beginning any work the Contractor must inform all other contractors in writing regarding the location, nature, and requirements of the work areas.
13. Material Safety Data Sheets/Specification Sheets: The Contractor shall submit Material Safety Data and Specification Sheets for all chemicals, encapsulants, etc. to be used for this project.

1.7 SUBMITTALS AT THE COMPLETION OF THE PROJECT

A. Upon completion of on-site work, Contractor shall provide a detailed project summary that will include each of the items listed below. The project Summary shall be submitted and approved by the District prior to acceptance of final pay request and shall include the following:
   1. Chain of custody documentation and laboratory reports for all analyses performed.
   2. Emergency evacuations and any other safety or health incidents.
   3. Submit uniform hazardous and non-hazardous waste manifests prepared, signed and dated by an agent of the landfill. The manifest must certify the amount of hazardous materials delivered to the landfill. The manifest must be provided to the District or District's Environmental Consultant within ten working days after delivery.
   4. Hazardous waste must be tested (TTLC/STLC/TCLP) and categorized for purposes of disposal. The Contractor shall submit written evidence of approved testing (including copy of the actual chain-of-custody forms) and disposal of hazardous wastes within five (5) days following the completion of each phase of the project.
   5. Personal air sample results.
   6. Project Summary:
      a. Abatement contractor's name and address, certification number (CSLB), registration number (DOSH) and Tax ID number.
      b. Hazardous waste hauler certifications (DOT).

c. Name, address and registration number of hazardous waste hauler.

d. Laboratory performing analyses (NVLAP).

e. Contract number and name of project.

f. Specific inventory (including locations and approximate quantities) of the hazardous materials which were removed or handled.

g. Number of employees working on the project.

h. Dates of commencement and completion of on-site work.

i. Work method employed (i.e., glove bag, mini-containment, full containment with negative air and decontamination enclosure system, etc.)

j. Name, location, telephone number and EPA registration of waste disposal site(s) used.

k. DOP testing results.

1.8 QUALITY ASSURANCE

A. Qualifications:

1. Asbestos Abatement Work: Only qualified persons shall engage in asbestos abatement activities. Work involving asbestos-containing materials exceeding 100 square feet (SF) or 100 linear feet (LF) shall be completed by a Contractor holding a valid asbestos handling license issued by the California State Contractors Licensing Board (SCLB) and a valid current Certificate of Registration for Asbestos-Related Work as issued by the California Department of Industrial Relations - Division of Occupational Safety and Health (Cal/OSHA). Work shall be completed under the on-site supervision of a Competent Person as defined by OSHA Regulation 29 CFR Part 1926.1101 (8 CCR 1529 in California). All abatement workers shall have AHERA training with annual 8-hour refresher training, current medical exams for the use of respiratory protection, and current fit test of appropriate respirators.

B. Regulatory Requirements: The Contractor shall be alerted to and familiar with the following laws and regulations regarding the hazards, control measures, management, characterizing, transport and disposal of hazardous wastes:

1. Asbestos and Lead Abatement Work: All labor, materials, facilities, equipment, services, employees and training, and testing necessary to perform the work required for asbestos abatement and disposal of waste shall be in accordance with these Specifications and the most current regulations, including but not limited to:

a. Environmental Protection Agency NESHAP and AHERA regulations (40 CFR Part 763, as applicable).

b. Occupational Safety and Health Administration (inclusive of OSHA 29 CFR 1926.1101)

c. California Department of Occupational Safety and Health (inclusive of Cal/OSHA 8 CCR 1529)

d. California Environmental Protection Agency (Cal/EPA).

e. Local Air Quality Management District or Air Pollution Control District Rules

f. Other applicable federal, state, and local governmental regulations pertaining to asbestos-containing materials (ACM) and asbestos waste.

PART 2 - PRODUCTS

2.1 SIGNS AND LABELS

A. Provide labeling in accordance with State and Federal EPA requirements. Provide the required signs, labels, warnings, placards or posted instructions for containers used to transport hazardous material to the landfill.

B. Location of Caution Signs and Labels: Provide bilingual caution signs at all approaches to work areas in languages used by the Contractor's employees. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Provide labels and affix to all asbestos-containing materials, scrap, waste, debris, and other products contaminated with hazardous materials.

C. Warning Sign Format: Vertical format conforming to Title 8 CCR 1529:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

D. Warning Label Format: Provide labels that comply with Title 8 CCR 1529 of sufficient size to be clearly legible, displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
DO NOT BREATHE DUST
AVOID CREATING DUST

E. Warning Sign Format: Vertical format conforming to Title 8 CCR 1532.1:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

F. Wherever the treatment process is reasonably expected to impact any lead-containing substances:

1. Post a sign 14” by 14” that includes the phrase, “Caution Lead Hazard. Keep Out” in bold lettering at least 2” inches high.
1. Postings shall be in English and Spanish, and in any language used by any of the Contractor’s employees as the primary language of communication.

2.2 PLASTIC SHEETING

A. Use fire-retardant (FR) polyethylene (poly) film.
1. Thickness - 6-mil, minimum, NO EXCEPTIONS.
2. Flame Resistance/Flame Spread Rate <25.
3. Conforms to NFPA #701 and Tested in accordance with ASTM E-84.

2.3 TAPE, ADHESIVE, SEALANTS

A. Tape, 2” or wider, shall be capable of sealing joints of adjacent sheet of polyethylene and shall attach polyethylene sheet to finished or unfinished surfaces or similar materials. Tape shall be capable of adhering under dry and wet conditions, including use of amended water. Taping to critical or sensitive surfaces shall be completed using preservation sealing tape.

B. Spray adhesive for sealing polyethylene to polyethylene shall contain no methylene chloride or methyl chloroform (1,1,1-trichloroethane) compounds.

2.4 VACUUM EQUIPMENT

A. All vacuum equipment used in the work area shall use HEPA filtration systems and be of the wet-dry type. The Contractor shall provide on-site independent DOP testing to document the effectiveness of the vacuum units. The test results shall be signed by the individual performing the testing. Repeat DOP testing every thirty (30) days after initial testing. Provide documentation to the District or District’s Environmental Consultant with 24 hours of DOP testing.

2.5 TRANSPORTATION EQUIPMENT

A. Transportation equipment, as required, shall be lockable and suitable for loading, temporary storage, transit and unloading of contaminated waste without exposure to persons or property. Any vehicle used to transport asbestos waste shall be properly registered with all applicable controlling agencies.

2.6 OTHER TOOLS AND EQUIPMENT

A. The Contractor shall provide other suitable tools for the stripping, removal and disposal activities.

B. Prohibited Equipment: The following equipment is prohibited from use on this project unless accepted in writing by the District or District’s Environmental Consultant:
1. High or low pressure water blasting equipment for hosing of work areas.
2. Bead blasting or other uncontained abrasive blasting methods.

3. Vacuum-powered removal or collection equipment located outside the asbestos work area, such as a “Vacu-Loader”.
4. Gasoline, propane, diesel or other fuel powered equipment inside the building, unless previously approved in writing by the District or District’s Environmental Consultant.
5. Equipment that creates excessive noise or vibration that would affect the safety of the building or generate complaints from neighboring building occupants. No equipment shall exceed an A-weighted sound level of 85 dB as measured at 3 ft. from the radiating source without written permission of the District or District’s Environmental Consultant.
6. Metal wire-brushes.
7. Flammable solvents with a flash point below 140 degrees F or materials containing ethylene glycol ether, methylene chloride, ethyl chloroform (1,1,1-trichloroethane), or other hazardous substances.
8. Non-fire retardant polyethylene sheeting.
9. Polyurethane spray foam for application in fire-rated assemblies, including but not limited to penetrations into stairwells, mechanical rooms, electrical closets, rated floor-to-floor assemblies, etc.

PART 3 - EXECUTION

3.1 WORK AREA SET-UP PROCEDURES - ASBESTOS AND LEAD

A. These controls shall be applied during the removal of walls systems within the affected kitchen and adjacent areas, as well as the removal of roofing materials if greater than the Class III thresholds.

B. Containment is required for removal of all interior ACMs. Contractor shall construct critical barrier containment(s). The work area(s) shall be placed under negative pressure as outlined in this specification throughout the abatement work period.

C. To permit the inspector to view the majority of the work area, the Contractor shall provide easily accessible viewing ports from the clean space into each abatement area. Viewing ports must be a minimum of 2' x 2', clear-see-through plastic with no scratches, tape or glue marks.

D. Pressure differential recorders are required to monitor negative in the work area. The recorders must be calibrated prior to arriving on site. Calibration shall be performed by qualified technicians following the procedures outlined by the manufacturers. Provide documentation of calibration before beginning work.

E. Negative pressure is to be maintained within each containment until such time as clearance activities have been completed and containments are authorized for removal.

F. A two-chamber decontamination unit may be allowed during the abatement work conducted in critical barrier containments. The unit shall be located immediately

outside the contained area and shall contain a wash down area. A pre-fabricated unit is acceptable.

G. Containments will not be required for exterior removal work involving roofing materials. All asbestos work must be performed within a demarcated regulated work. At minimum 6-mil polyethylene shall be installed at the perimeter of the building and extended 10' in all directions. Drop polyethylene must be secured at the base of the building at the perimeter.

H. Approved fire extinguishers (Class ABC, multi-purpose, dry chemical type, rated: 4A; 60BC) shall be readily available to workers (maximum travel distance of 50 feet) inside and adjacent to work area(s). Personnel and emergency exits shall be clearly indicated on the inside of the containment area. The emergency exit plan shall be approved by the District or District's designated representative prior to the set-up of any work areas.

I. The District or District's Environmental Consultant reserves the right to inspect and approve all containment setups before any abatement is undertaken.

J. If a containment area is breached (failure of polyethylene seals, visible dust emission, fiber counts above background level, etc.), the Contractor shall take immediate action to control the breach and clean the area to the satisfaction of the District or District's Environmental Consultant.

K. If sample results indicate that conditions have exceeded the baseline or clearance criteria, as determined by the District or District's Environmental Consultant, all work shall cease. Work shall not recommence until the condition(s) causing the increase have been corrected.

L. Verify that all electrical power, gas, sewage, water, phone lines, fire life safety lines and sprinkler systems to the work area have been shut down and disconnected so that there is no possibility of reactivation and electrical shock.

M. Provide all connections for temporary utilities in the work area needed throughout abatement. Temporary electrical power shall be according to OSHA and the National Electrical Code for Wet Environments.

N. Contractor shall conform to the District's lockout requirements, and secure the work area at all times. Area entrances and exits shall be secured by the Contractor throughout the abatement phase. Unauthorized visitors are strictly prohibited. Only the Contractor, District or District's designative representatives are permitted at the job site. Contractor shall ensure that all doors, gates, windows, and potential entrances to the work areas and the designated waste location areas are secured and locked at the end of each workday.

O. Contractor shall store all materials, equipment, and supplies for the project inside the building or in areas designated by the District and in accordance with District's requirements.

P. As required, establish designated limits for the abatement work area with continuous barriers. Use barrier tape (3-inch) with a pre-printed asbestos warning throughout

exterior asbestos abatement activities. Provide signs around the perimeter of all the interior works areas per the EPA and Cal-OSHA.

Q. Contractor shall provide temporary sanitary services of adequate capacity to handle the maximum estimated crew size plus an additional twenty percent. Contractor shall maintain the temporary facilities throughout the duration of the project.

R. The Contractor shall be responsible for identifying all HVAC components (if applicable) that lead into or out of the work areas. All components shall be disconnected and sealed airtight for the duration of the abatement work. All openings shall be sealed with two (2) layers of 6 mil polyethylene secured with duct tape, as applicable.

S. Pre-clean the work area and fixed objects in the work area using HEPA filtered vacuums and/or wet cleaning methods. Protect fixed objects with protective barriers (as appropriate) and cover with 6 mil poly sealed with tape.

3.2 WORK AREA SET-UP PROCEDURES - ASBESTOS AND LEAD (LIMITED CLASS III CONTRACTOR ASSIST ACTIVITIES)

T. Containment is not required for Class III Operations as well as roofing material abatement. However, all work shall be conducted within an asbestos regulated area as required by Cal-OSHA. Contractor shall seal operable air intakes and critical barriers within 5 feet of the work area with 6-mil polyethylene sealed with tape.

U. Any disturbance of ACMs must be performed within a regulated area. If dust or debris is generated from asbestos related activity, work must be performed in a mini-enclosure with negative pressure or critical barrier containment.

V. Approved fire extinguishers (Class ABC, multi-purpose, dry chemical type, rated: 4A; 60BC) shall be readily available to workers (maximum travel distance of 50 feet) inside and adjacent to work area(s). Personnel and emergency exits shall be clearly indicated on the inside of the containment area. The emergency exit plan shall be approved by the District's Environmental Consultant prior to the set up of any work areas.

3.3 PERSONNEL PROTECTION

A. Informed Workers:

1. All workers shall be informed of the hazards of ACMs, lead and any other hazardous materials exposure. Workers shall also be instructed in the use and fitting of respirators, protective clothing, decontamination procedures, and all other aspects associated with the abatement work.

B. Personal Hygiene Practices:

2. The Contractor shall enforce and follow good personal hygiene practices during the abatement of hazardous materials. These practices will include but not be limited to the following: no eating, drinking, smoking or applying cosmetics in the work area. The Contractor shall provide a clean space, separated from the work area, for these activities.

3. If data gathered by the exposure assessment phases shows exposure to airborne asbestos or other hazardous materials exceeding Cal-OSHA criteria, that area will become regulated and workers must wear protective clothing and approved respirators and must have a shower facility provided to them.

C. Respirators:

1. Establish a respiratory protection program as outlined by ANSI and required by Cal-OSHA. Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH). Respirators selected must be approved by the Competent Person. Submit program for review a minimum of five (5) working days prior to the commencement of abatement activities.
2. Provide workers with approved and personally-issued respirators with replaceable filters. Provide sufficient quantity of filters approved by NIOSH for use in asbestos environments so that workers can change filters as required by the manufacturer.
3. At a minimum, provide each employee with the following respiratory protection for each work phase:
   a. Pre-cleaning, containment set-up, and containment removal work: NIOSH-approved, half-face respirators with HEPA cartridges.
   b. Asbestos abatement of drywall with asbestos containing joint compound, as well as disturbance of surfaces with known or unknown lead concentrations: half-face respirators with HEPA cartridges and organic vapor cartridges (as necessary).

D. Protective Clothing: The contractor shall determine appropriate personal protective clothing to comply with all applicable regulations based on their understanding of potential exposures.

E. Eye Protection: Provide safety glasses or goggles to personnel removing or handling asbestos-containing materials and waste.

F. Emergency Precautions and Procedures:

1. Establish emergency and fire exits from the work area. Display necessary signage at exits and paths to exits with representative visual aids. A diagram of all emergency and fire exits shall be posted in a conspicuous area proximate to the entrance to each work area.
2. The Contractor's supervisor/competent person shall be trained and certified in first aid and CPR, and be prepared to administer first aid to injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated without delay for decontamination. When an injury occurs, the Contractor shall implement fiber reduction techniques until the injured person has been removed from the work area.
3. In the event of a loss of negative pressure to the work area, work shall stop immediately and entrances to the work area sealed tight. The Contractor shall also institute fiber reduction controls until negative pressure is re-established to acceptable levels.

3.4 DECONTAMINATION - ASBESTOS AND LEAD

A. Following the applicable asbestos and lead related work, all reusable, contaminated equipment, such as masks, hard hats, boots, etc. shall be thoroughly decontaminated through wet cleaning methods before removal from the work area.

B. No accumulation of debris or standing water will be permitted following the initial decontamination. All visible asbestos debris on soil will be removed to baseline concentrations.

3.5 WASTE LOAD OUT PROCEDURES

A. Ensure that polyethylene bags are sealed air-tight. All bags shall be wet cleaned prior to removing them from the equipment decontamination unit.

B. Ensure all disposal containers are properly labeled in accordance with 8 CCR 1529, 5194 (HAZCOM), 49 CFR 171-179 (USDOT), 40 CFR 61 Subpart M (NESHAP), and any local regulations and state regulations as required by this specification.

3.6 ENGINEERING CONTROLS

A. For the purposes of this project, all work shall be performed utilizing equipment that has been designed to work with shrouds equipped with HEPA Filtration or using local exaust ventilation. These shall be sufficient to control all visible emissions of dusts and debris.

B. If the contractor is unable to prove through visual inspection and air monitoring data that the controls selected will be sufficient to prevent the generation of gross debris or airborne asbestos fibers, additional engineering controls, such as the usage of negatively pressurized miniature enclosures shall be required at no additional cost to the contract.

3.7 HAZARDOUS MATERIALS DISPOSAL

A. It is the responsibility of the Contractor to determine current waste handling, labeling, transportation and disposal regulations for the work site and for each waste disposal landfill. The Contractor must comply fully with these Specifications, local, state, and federal regulations and provide documentation of the same.

B. Ensure all disposal containers are properly labeled per 8 CCR 1529, 5194 (HAZCOM), 49 CFR 171-179 (USDOT), 40 CFR 61 Subpart M (NESHAP), and any local regulations and state regulations as required by this specification.

C. Filter all wastewater to the technically feasible limit, but not more than five (5) microns before disposal. Comply with all current local, state and federal codes relating to waste water release.

D. Asbestos-containing waste that is properly labeled and sealed may be temporarily stored in areas approved by the District. Areas must be made secure before storing the waste. Waste is not to remain in temporary storage area for longer than one (1) week before final load-out of materials.

E. All lead related waste streams and waste categories shall be considered hazardous until proven otherwise through testing by the Contractor. If the Contractor allows different waste stream to become co-mingled, the waste will be classified as hazardous if any single component waste stream is hazardous.

F. Each lead related waste produced shall be placed in properly segregated, labeled and sealed, impervious containers.

G. Each category of waste, except components with intact paint, will be tested and characterized by the Design Build Entity's Observation Service using one or more of the following testing protocols:

1. Total Threshold Limit Concentration (TTLC): 1,000 ppm lead.
2. Soluble Threshold Limit Concentration (STLC): 5 µg/L lead.
3. Toxicity Characteristic Leaching Procedure (TCLP): 5 µg/L lead.

H. Based on the testing protocols, any waste greater than TTLC, STLC or TCLP concentrations listed above shall be considered a hazardous waste.

I. All vehicles used to transport hazardous waste must be registered with the Department of Toxic Substances Control and Department of Transportation and maintain proper registration and with vehicle at all times.

J. All vehicles and containers used to transport waste are subject to inspection and approval of District prior to departure from site.

K. Contractor shall not throw bags into the truck in a way that may cause the bags to burst open.

L. Contractor shall provide at minimum one (1) day advance notification to the District when signatures are required on manifest(s). The Contractor shall ensure that the Hazardous Waste Manifest is correctly filled out. The Contractor shall give the appropriate copies to the District and shall also instruct the District in writing that they must send the appropriate copy to the Department of Toxic Substances Control.

M. If a debris box is used, the Contractor shall make all necessary arrangement with the District including obtaining all appropriate permits.

N. Contractor is responsible for all coordination with the waste disposal site and with the waste hauling company.

O. Debris box shall be constructed with minimum 20-gauge steel with no windows or openings other than the door. Debris box for hazardous waste shall be fully lined with a double layer of polyethylene sheeting and must be locked at all times when unattended. Once the debris box is filled and the manifest is signed, Contractor must transport the debris box off the job site.

P. Disposal shall be in a District approved landfill that meets EPA requirements.

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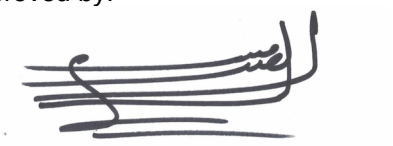
Report for:

William Frieszell, William Frieszell
Terracon Consultants, Inc. - Emeryville
1466 66th Street
Emeryville, CA 94608

Regarding: Project: R1207078; Houston School, 4600 Acampo Rd, Acampo, CA
EML ID: 2399584

Approved by:



Approved Signatory
Amin Suliman

Dates of Analysis:
Asbestos PLM: 05-05-2020

Service SOPs: Asbestos PLM (EPA 40CFR App E to Sub E of Part 763 & EPA METHOD 600/R-93-116, SOP EM-AS-S-1267)
NVLAP Lab Code 200728-0

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the samples as received. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

Eurofins EMLab P&K
6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080
(866) 888-6653 Fax (623) 780-7695 www.emlab.com

Client: Terracon Consultants, Inc. - Emeryville
C/O: William Frieszell, William Frieszell
Re: R1207078; Houston School, 4600 Acampo Rd, Acampo, CA

Date of Sampling: 05-01-2020
Date of Receipt: 05-04-2020
Date of Report: 05-05-2020

ASBESTOS PLM REPORT

Total Samples Submitted:	33
Total Samples Analyzed:	33
Total Samples with Layer Asbestos Content > 1%:	6

Location: 1A, TPO roofing membrane on asphalt; roof over kitchen Lab ID-Version‡: 11445949-1

Sample Layers	Asbestos Content
Gray/White Roofing Material	ND
Black Roofing Material	20% Chrysotile
Composite Non-Asbestos Content:	15% Synthetic Fibers 10% Glass Fibers
Sample Composite Homogeneity:	Poor

Location: 1B, TPO roofing membrane on asphalt; roof over kitchen Lab ID-Version‡: 11445950-1

Sample Layers	Asbestos Content
Gray/White Roofing Material	ND
Black Roofing Material	20% Chrysotile
Composite Non-Asbestos Content:	15% Synthetic Fibers 10% Glass Fibers
Sample Composite Homogeneity:	Poor

Location: 1C, TPO roofing membrane on asphalt; roof over kitchen Lab ID-Version‡: 11445951-1

Sample Layers	Asbestos Content
Gray/White Roofing Material	ND
Black Roofing Material	20% Chrysotile
Composite Non-Asbestos Content:	15% Synthetic Fibers 10% Glass Fibers
Sample Composite Homogeneity:	Poor

Location: 2A, Clear adhesive on foam insulation; kitchen walk in cooler wall Lab ID-Version‡: 11445952-1

Sample Layers	Asbestos Content
Transparent Adhesive	ND
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Client: Terracon Consultants, Inc. - Emeryville
C/O: William Frieszell, William Frieszell
Re: R1207078; Houston School, 4600 Acampo Rd, Acampo, CA

Date of Sampling: 05-01-2020
Date of Receipt: 05-04-2020
Date of Report: 05-05-2020

ASBESTOS PLM REPORT

Location: 2B, Clear adhesive on foam insulation; kitchen walk in cooler wall Lab ID-Version‡: 11445953-1

Sample Layers	Asbestos Content
Transparent Adhesive	ND
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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Client: Terracon Consultants, Inc. - Emeryville
C/O: William Frieszell, William Frieszell
Re: R1207078; Houston School, 4600 Acampo Rd, Acampo, CA

Date of Sampling: 05-01-2020
Date of Receipt: 05-04-2020
Date of Report: 05-05-2020

ASBESTOS PLM REPORT

Location: 2C, Clear adhesive on foam insulation; kitchen walk in cooler wall Lab ID-Version‡: 11445954-1

Sample Layers	Asbestos Content
Transparent Adhesive	ND
Sample Composite Homogeneity:	Good

Location: 3A, Brown 12" ceiling tile mastic; kitchen South side ceiling Lab ID-Version‡: 11445955-1

Sample Layers	Asbestos Content
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 3B, Brown 12" ceiling tile mastic; lounge North side ceiling Lab ID-Version‡: 11445956-1

Sample Layers	Asbestos Content
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Location: 3C, Brown 12" ceiling tile mastic; kitchen North side ceiling Lab ID-Version‡: 11445957-1

Sample Layers	Asbestos Content
Brown Mastic	ND
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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Client: Terracon Consultants, Inc. - Emeryville
C/O: William Frieszell, William Frieszell
Re: R1207078; Houston School, 4600 Acampo Rd, Acampo, CA

Date of Sampling: 05-01-2020
Date of Receipt: 05-04-2020
Date of Report: 05-05-2020

ASBESTOS PLM REPORT

Location: 4A, Plaster with skim coat; kitchen North side ceiling Lab ID-Version‡: 11445958-1

Sample Layers	Asbestos Content
White Skim Coat	ND
White Plaster	ND
Sample Composite Homogeneity:	Poor

Location: 4B, Plaster with skim coat; kitchen East side wall Lab ID-Version‡: 11445959-1

Sample Layers	Asbestos Content
White Skim Coat	ND
White Plaster	ND
Sample Composite Homogeneity:	Poor

Location: 4C, Plaster with skim coat; restroom North wall Lab ID-Version‡: 11445960-1

Sample Layers	Asbestos Content
White Skim Coat	ND
White Plaster	ND
Sample Composite Homogeneity:	Poor

Location: 4D, Plaster with skim coat; lounge North wall Lab ID-Version‡: 11445961-1

Sample Layers	Asbestos Content
White Skim Coat	ND
White Plaster	ND
Sample Composite Homogeneity:	Poor

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Eurofins EMLab P&K
6000 Shoreline Ct, Ste 205, So. San Francisco, CA 94080
(866) 888-6653 Fax (623) 780-7695 www.emlab.com

Client: Terracon Consultants, Inc. - Emeryville
C/O: William Frieszell, William Frieszell
Re: R1207078; Houston School, 4600 Acampo Rd, Acampo, CA

Date of Sampling: 05-01-2020
Date of Receipt: 05-04-2020
Date of Report: 05-05-2020

ASBESTOS PLM REPORT

Location: 4E, Plaster with skim coat; kitchen South wall Lab ID-Version‡: 11445962-1

Sample Layers	Asbestos Content
White Skim Coat	ND
White Plaster	ND
Sample Composite Homogeneity:	Poor

Location: 4F, Plaster with skim coat; restroom East wall Lab ID-Version‡: 11445963-1

Sample Layers	Asbestos Content
White Skim Coat	ND
White Plaster	ND
Sample Composite Homogeneity:	Poor

Location: 5A, Wallboard with taping mud; storage room South wall Lab ID-Version‡: 11445964-1

Sample Layers	Asbestos Content
White Compound	2% Chrysotile
Cream Tape	ND
White Joint Compound	2% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Poor

Comments: Composite content provided for this analysis has been performed by following the NESHAP guidelines.

Location: 5B, Wallboard with taping mud; storage room North wall Lab ID-Version‡: 11445965-1

Sample Layers	Asbestos Content
White Compound	3% Chrysotile
Cream Tape	ND
White Joint Compound	3% Chrysotile
White Drywall	ND
Composite Asbestos Fibrous Content:	< 1% Asbestos
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Poor

Comments: Composite content provided for this analysis has been performed by following the NESHAP guidelines.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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Client: Terracon Consultants, Inc. - Emeryville
C/O: William Frieszell, William Frieszell
Re: R1207078; Houston School, 4600 Acampo Rd, Acampo, CA

Date of Sampling: 05-01-2020
Date of Receipt: 05-04-2020
Date of Report: 05-05-2020

ASBESTOS PLM REPORT

Location: 5C, Wallboard with taping mud; kitchen West wall Lab ID-Version‡: 11445966-1

Sample Layers	Asbestos Content
White Compound	3% Chrysotile
White Drywall	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Poor

Location: 6A, Yellow/brown cove base adhesive; kitchen East wall Lab ID-Version‡: 11445967-1

Sample Layers	Asbestos Content
Yellow Adhesive	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Moderate

Location: 6B, Yellow/brown cove base adhesive; restroom hallway East wall Lab ID-Version‡: 11445968-1

Sample Layers	Asbestos Content
Yellow Adhesive	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Moderate

Location: 6C, Yellow/brown cove base adhesive; lounge South wall Lab ID-Version‡: 11445969-1

Sample Layers	Asbestos Content
Yellow Adhesive	ND
Brown Mastic	ND
Sample Composite Homogeneity:	Moderate

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Client: Terracon Consultants, Inc. - Emeryville
C/O: William Frieszell, William Frieszell
Re: R1207078; Houston School, 4600 Acampo Rd, Acampo, CA

Date of Sampling: 05-01-2020
Date of Receipt: 05-04-2020
Date of Report: 05-05-2020

ASBESTOS PLM REPORT

Location: 7A, Yellow wood wall panel adhesive; lounge at North wall Lab ID-Version‡: 11445970-1

Sample Layers	Asbestos Content
Yellow Adhesive	ND
Sample Composite Homogeneity:	Good

Location: 7B, Yellow wood wall panel adhesive; lounge at West wall Lab ID-Version‡: 11445971-1

Sample Layers	Asbestos Content
Yellow Adhesive	ND
Sample Composite Homogeneity:	Good

Location: 7C, Yellow wood wall panel adhesive; lounge at West wall Lab ID-Version‡: 11445972-1

Sample Layers	Asbestos Content
Yellow Adhesive	ND
Sample Composite Homogeneity:	Good

Location: 8A, 2" gray multi pattern ceramic floor tile with grout/adhesive/mortar; restroom floor Lab ID-Version‡: 11445973-1

Sample Layers	Asbestos Content
Gray Ceramic Tile	ND
Gray Grout	ND
Gray Mortar	ND
Sample Composite Homogeneity:	Poor

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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Client: Terracon Consultants, Inc. - Emeryville
C/O: William Frieszell, William Frieszell
Re: R1207078; Houston School, 4600 Acampo Rd, Acampo, CA

Date of Sampling: 05-01-2020
Date of Receipt: 05-04-2020
Date of Report: 05-05-2020

ASBESTOS PLM REPORT

Location: 8B, 2" gray multi pattern ceramic floor tile with grout/adhesive/mortar; restroom floor

Lab ID-Version‡: 11445974-1

Sample Layers	Asbestos Content
Gray Ceramic Tile	ND
Gray Grout	ND
Gray Mortar	ND
Sample Composite Homogeneity:	Poor

Location: 8C, 2" gray multi pattern ceramic floor tile with grout/adhesive/mortar; restroom floor

Lab ID-Version‡: 11445975-1

Sample Layers	Asbestos Content
Gray Ceramic Tile	ND
Gray Grout	ND
Gray Mortar	ND
Sample Composite Homogeneity:	Poor

Location: 9A, 6" light gray ceramic wall tile trim with grout/adhesive; restroom East wall

Lab ID-Version‡: 11445976-1

Sample Layers	Asbestos Content
Light Gray Ceramic Tile	ND
White Grout	ND
Gray Leveling Compound	ND
Sample Composite Homogeneity:	Poor

Location: 9B, 6" light gray ceramic wall tile trim with grout/adhesive; restroom East wall

Lab ID-Version‡: 11445977-1

Sample Layers	Asbestos Content
Light Gray Ceramic Tile	ND
White Grout	ND
Gray Leveling Compound	ND
Sample Composite Homogeneity:	Poor

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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Client: Terracon Consultants, Inc. - Emeryville
C/O: William Frieszell, William Frieszell
Re: R1207078; Houston School, 4600 Acampo Rd, Acampo, CA

Date of Sampling: 05-01-2020
Date of Receipt: 05-04-2020
Date of Report: 05-05-2020

ASBESTOS PLM REPORT

Location: 9C, 6" light gray ceramic wall tile trim with grout/adhesive; restroom North wall

Lab ID-Version‡: 11445978-1

Sample Layers	Asbestos Content
Light Gray Ceramic Tile	ND
White Grout	ND
Gray Leveling Compound	ND
Sample Composite Homogeneity:	Poor

Location: 10A, Mortar; storage room floor

Lab ID-Version‡: 11445979-1

Sample Layers	Asbestos Content
Gray Mortar	ND
Sample Composite Homogeneity:	Good

Location: 10B, Mortar; kitchen floor

Lab ID-Version‡: 11445980-1

Sample Layers	Asbestos Content
Gray Mortar	ND
Sample Composite Homogeneity:	Good

Location: 10C, Mortar; restroom hallway floor

Lab ID-Version‡: 11445981-1

Sample Layers	Asbestos Content
Gray Mortar	ND
Sample Composite Homogeneity:	Good

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

002399584

Terracon

***E-MAIL REPORT TO: *SEE BELOW PROJECT MANA*

☐ PM – S. Steiner spsteiner@terracon.com
☐ PM – K. Schroeter kmschroeter@terracon.com
☐ PM – K. Pilgrim kmpilgrim@terracon.com
☐ PM- M. Benefield msbenefield@terracon.com
☐ PM – T. Kattchee takattchee@terracon.com
☑ PM – W. Frieszell wmfrieszell@terracon.com
☐ PM- D. Block David.block@terracon.com
☐ denise.wallen@terracon.com Engineering Assistant
☐ eric.dyer@terracon.com Engineering Assistant

ACM BULK SAMPLE DATA SHEET

☑ PLM Analysis (Analyze all samples)
☐ Stop Analysis at First Positive
☐ Point Count Analysis (400-point)

Project Name/ Address/ Building No. Houston School / 4600 Acampo Rd, Acampo, CA 95220

Project# R1207078 **Sampled By:** J. Alexander **Sampling Date:** 5/1/20

Sample(s) sent to: ☐ MAL ☐ ASB TEM ☑ EMLAB ☐ Other _____

TAT ☐ Rush ☑ 24HRS ☐ 48HR ☐ 3-5 days

HM#	Material Description: TPO Roofing Membrane on Asphalt	Quantity:
Sample ID	Sample Location & Material Location	
1A	Roof over Kitchen	
1B	Roof over Kitchen	
1C	Roof over Kitchen	
HM# 2	**Material Description: Clear Adhesive on Foam Insulation**	**Quantity:**
Sample ID	Sample Location & Material Location	
2A	Kitchen Walk in Cooler Wall	
2B	Kitchen Walk in Cooler Wall	
2C	Kitchen Walk in Cooler Wall	
HM# 3	**Material Description: Brown 12" Ceiling Tile Matte**	**Quantity:**
Sample ID	Sample Location & Material Location	
3A	Kitchen South Side Ceiling	
3B	~~Kitchen~~ South ~~Lounge~~ North Side Ceiling	
3C	Kitchen North Side Ceiling	
HM# 4	**Material Description: Plaster with Skim Coat**	**Quantity:**
Sample ID	Sample Location & Material Location	
4A	Kitchen North Side Ceiling	
4B	Kitchen East Side Wall	
4C	Restroom North Wall	
HM#	**Material Description:**	**Quantity:**
Sample ID	Sample Location & Material Location	
4D	Lounge North Wall	
4E	Kitchen South Wall	
4F	Restroom East Wall	

Relinquished By:	J. Alexander	Signature:		Date/Time:	5/1/20
Received By:		Signature:		Date/ Time:	5/2/20 9:10
Relinquished By:		Signature:		Date/Time:	
Received By:		Signature:		Date/Time:	

002399584

Terracon

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☐ PM- D. Block David.block@terracon.com	☐ denise.wallen@terracon.com Engineering Assistant	☐ eric.dyer@terracon.com Engineering Assistant

ACM BULK SAMPLE DATA SHEET

☑ PLM Analysis (Analyze all samples)
☐ Stop Analysis at First Positive
☐ Point Count Analysis (400-point)

Project Name/ Address/ Building No. Houston School / 4600 Acampo Rd, Acampo, CA 95220

Project# R1207078 **Sampled By:** J. Alexander **Sampling Date:** 5/1/20

Sample(s) sent to: ☐ MAL ☐ ASB TEM ☑ EMLAB ☐ Other

TAT ☐ Rush ☑ 24HRS ☐ 48HR ☐ 3-5 days

HM# 5	Material Description: Wallboard with Taping Mud	
Sample ID	Sample Location & Material Location	Quantity:
5A	Storage Room South Wall	
5B	Storage Room North Wall	
5C	Kitchen West Wall	

HM# 6	Material Description: Yellow / Brown Cove Base Adhesive	
Sample ID	Sample Location & Material Location	Quantity:
6A	Kitchen East Wall	
6B	Restroom Hallway East Wall	
6C	Lounge South Wall	

HM# 7	Material Description: Yellow Wood Wall Panel Adhesive	
Sample ID	Sample Location & Material Location	Quantity:
7A	Lounge at North Wall	
7B	Lounge at West Wall	
7C	Lounge at West Wall	

HM# 8	Material Description: 2" Gray Multi pattern Ceramic Floor Tile with Grout/Adhesive/Mortar	
Sample ID	Sample Location & Material Location	Quantity:
8A	Restroom Floor	
8B	Restroom Floor	
8C	Restroom Floor	

HM# 9	Material Description: 6" Light Gray Ceramic Wall Tile with Grout/Adhesive	
Sample ID	Sample Location & Material Location	Quantity:
9A	Restroom East Wall	
9B	Restroom East Wall	
9C	Restroom North Wall	

Relinquished By:	J. Alexander	**Signature:**		**Date/Time:**	5/1/20
Received By:	Jeffrey Lee	**Signature:**		**Date/ Time:**	5/2/20 9:10
Relinquished By:		**Signature:**		**Date/Time:**	
Received By:		**Signature:**		**Date/Time:**	

002399584

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E-MAIL REPORT TO: *SEE BELOW PROJECT MANAGER (PM)*

☐ PM – S. Steiner spsteiner@terracon.com	☐ PM – K. Schroeter kmschroeter@terracon.com	☐ PM – K. Pilgrim kmpilgrim@terracon.com
☐ PM- M. Benefield msbenefield@terracon.com	☐ PM – T. Kattchee takattchee@terracon.com	☑ PM – W. Frieszell wmfrieszell@terracon.com
☐ PM- D. Block David.block@terracon.com	☐ denise.wallen@terracon.com Engineering Assistant	☐ eric.dyer@terracon.com Engineering Assistant

ACM BULK SAMPLE DATA SHEET

☑ PLM Analysis (Analyze all samples)
☐ Stop Analysis at First Positive
☐ Point Count Analysis (400-point)

Project Name/ Address/ Building No. Houston School / 4600 Acampo Rd, Acampo, CA 95220

Project# R207078 **Sampled By:** J. Alexander **Sampling Date:** 5/1/20

Sample(s) sent to: ☐ MAL ☐ ASB TEM ☑ EMLAB ☐ Other _____

TAT ☐ Rush ☑ 24HRS ☐ 48HR ☐ 3-5 days

HM# 10	Material Description: Mortar	
Sample ID	Sample Location & Material Location	Quantity:
10A	Storage Room Floor	
10B	Kitchen Floor	
10C	Restroom Hallway Floor	

HM#	Material Description:	
Sample ID	Sample Location & Material Location	Quantity:

HM#	Material Description:	
Sample ID	Sample Location & Material Location	Quantity:

HM#	Material Description:	
Sample ID	Sample Location & Material Location	Quantity:

Relinquished By:	J. Alexander	Signature:		Date/Time:	5/1/20
Received By:	Jeffrey Wax	Signature:		Date/ Time:	5/2/20 9:10
Relinquished By:		Signature:		Date/Time:	
Received By:		Signature:		Date/Time:	

eurofins | EMLab P&K

Report for:

William Frieszell
Terracon Consultants, Inc. - Emeryville
1466 66th Street
Emeryville, CA 94608

Regarding: Project: R1207078; Houston School, 4600 Acampo Rd, Acampo, CA
EML ID: 2399585

Approved by:

Technical Manager
Andrew Ikeda

Dates of Analysis:
Lead - Flame AA: 05-05-2020

Service SOPs: Lead - Flame AA (EM-BC-S-8443)
AIHA-LAP, LLC accredited service, Lab ID #178697

Eurofins EMLab P&K
17461 Derian Ave, Suite 100, Irvine, CA 92614
(866) 888-6653 Fax (623) 780-7695 www.emlab.com

Client: Terracon Consultants, Inc. - Emeryville
C/O: William Frieszell
Re: R1207078; Houston School, 4600 Acampo Rd, Acampo, CA

Date of Sampling: 05-01-2020
Date of Receipt: 05-04-2020
Date of Report: 05-05-2020

LEAD: FLAME ATOMIC ABSORPTION SPECTROMETRY

Location:	Pb-1: White plaster wall, kitchen	Pb-2: White wallboard wall, storage	Pb-3: Gray 2" ceramic tile, floor, restroom	Pb-4: Gray 6" ceramic tile, wall trim, restroom
Comments (see below)	None	None	None	None
Lab ID-Version‡:	11445906-1	11445907-1	11445908-1	11445909-1
Analysis Date:	05/05/2020	05/05/2020	05/05/2020	05/05/2020
Sample type	Bulk sample	Paint Chip sample	Bulk sample	Bulk sample
Method*	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified
† Method Reporting Limit	39 ppm	40 ppm	39 ppm	39 ppm
Sample size	0.2541 grams	0.2523 grams	0.2557 grams	0.2580 grams
§Total Lead Result	370 ppm	< 40 ppm	< 39 ppm	68 ppm

Comments:

Sample results have not been corrected for blank values.

Bulk samples are not covered under the AIHA-LAP, LLC service accreditation.

Wipe samples must meet ASTM E1792 criteria. Method Reporting Limits may not be valid for non-ASTM E1792 wipe samples.

*Sample preparation and analytical methods are based upon NIOSH 7082 and EPA 7000B.

† The Method Reporting Limit is the minimum concentration of Lead that the laboratory can confidently detect in the sample.

§ Total Lead Result has been rounded to two significant figures to reflect analytical precision.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

002399585

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E-MAIL REPORT TO: *PROJECT MANAGER (PM)

☐ denise.wallen@terracon.com Engineering Assistant	☐ eric.dyer@terracon.com Engineering Assistant
☐ PM – S. Steiner spsteiner@terracon.com	☐ PM – K. Schroeter kmschroeter@terracon.com
☐ PM – K. Pilgrim kmpilgrim@terracon.com	☐ PM- M. Benefield msbenefield@terracon.com
☐ PM – W. Frieszell wmfrieszell@terracon.com	☐ PM – T. Kattchee takattchee@terracon.com
☐ PM – D. Block david.block@terracon.com	

LEAD PAINT SAMPLE DATA SHEET

* Lead Analysis
✓ Flame AA (EPA 7420) ✓ TTLC

PAGE 1 OF 1

Project Name/ Address/ Building No. Hoover School / 4600 Acampo Rd. / Acampo, CA 95220

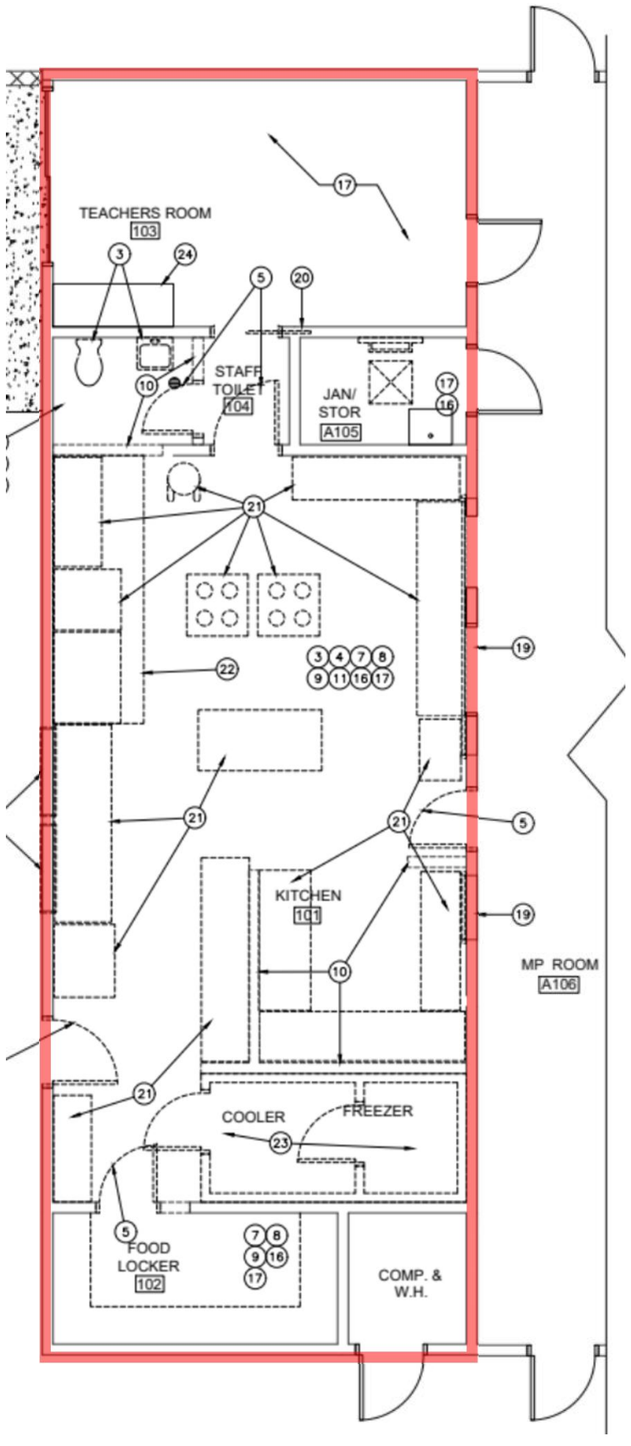
Project# R1207078 **Sampled By:** J. Alexander **Sampling Date:** 5/1/20

Sample(s) sent to: ☐ MAL ☐ EMSL ☐ Aerobiology ☐ Quantem **Other** Emlab

TAT ☐ Rush ☑ 24HRS ☐ 48HRS ☐ 3-5 Day

Sample ID	Paint Description and Sample Location	Condition (I/F/P)
Pb-1	Paint Color: White Substrate: Plaster Component: Wall Sample Location: Bldg # 4600 Acampo Rd. Unit # ____ Room Kitchen	F
Pb-2	Paint Color: White Substrate: Wallboard Component: Wall Sample Location: Bldg # 4600 Acampo Rd. Unit # ____ Room Storage	F
Pb-3	Paint Color: Gray Substrate: 2" Ceramic Tile Component: Floor Sample Location: Bldg # 4600 Acampo Rd. Unit # ____ Room Restroom	I
Pb-4	Paint Color: Gray Substrate: 6" Ceramic Tile Component: Wall Trim Sample Location: Bldg # 4600 Acampo Rd. Unit # ____ Room Restroom	I
	Paint Color: ____ Substrate: ____ Component: ____ Sample Location: Bldg # ____ Unit # ____ Room ____	

Relinquished By:	J. Alexander	**Signature:**		**Date/Time:**	5/1/20
Received By:	Jeffrey Wu	**Signature:**		**Date/ Time:**	5/2/20 9:10
Received By:	J. Timmons	**Signature:**		**Date/Time:**	5/4/20 9:27 5/5/2020 9:50



= ACM Wall / Ceiling Systems Located Throughout. Interspersed with Non-ACM Plaster

N

Not to Scale

Terracon

Houston Elementary School

Multipurpose Building Kitchen Renovation

Limited Asbestos and Lead Abatement Specifications

4600 East Acampo Road
Acampo, California

Date	Drafted By
May 2020	WMF
Project Number	**Checked By**
R1207078	SPS

Sheet Name
Material Location Diagrams

Sheet Number
Figure 1

HENRY+ ASSOCIATES ARCHITECTS
730 Howe Avenue, Suite 450
Sacramento, CA 95825
Phone: 916.921.2112
Fax: 916.921.2212

May 13, 2020
Sign-In Sheet
Mandatory Pre-Bid Meeting
Kitchen Renovation Houston (Serna) School
Lodi Unified School District

	Name	Company	Phone	Email
1	STEPHEN HENRY	HENRY + ASSOCIATES ARCHITECTS	916.799.3027	stephen@henry-architects.com
2	JOE PATTY / BRYAN HOLLOWAY			
3	HAROLD WILLIAMS	ENVIRONMENTAL HEALTH - PSOGIAS	916.256.7899	harold@selectenviro@gmail.com
4	TYLER MIYASHIRO	DIVISION 515 steel and mechanical	916.038 1520 FABRICATORS	t.miyashiro@division515.com
5	USMAN KHAN	Sabo Inc.	626.260.2849	fabsgm@sboglobal.net.
6	AARON FLORES	F+H CONST.com.	209.931.3738	estimating@F-Hconst.com
7	BLAINE VORHIS	DIOSE CONST.	209.369.8285	estimating@DIOSEconstruction.com
8	Steve Hayes	DONLAWLEY	209.456.1185	steve@donlawley co.com
9	DAN BENEVENTO	AMSTAR DUBE	669 293 8112	DAN@AMSTARDUBE.COM
10	Dave Craig	PnP Const.	530 885-9360	Kimberly@gopnp.com

May 13, 2020
Sign-In Sheet
Mandatory Pre-Bid Meeting
Kitchen Renovation Houston (Serna) School
Lodi Unified School District

	Name	Company	Phone	Email
11	Killian O'Brien	Bobo Construction Inc	916-383-7777	bestimating@bobo construction inc.com
12	Mike Ross	Pro Builders	916-225-0373	Sebastian@SacProBuilders.com
13	KEVIN BUSSARD	WEST COAST ENVIRONMENTAL	916-852-7200	KEVINWCE@ATT.NET
14	Travis Collins	T & S West	209-942-1360	estmating@tandsinc.us
15				
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23				