Business Services
Contracts Office
5735 47th Avenue ● Sacramento, CA 95824
(916) 643-2464
Lisa Grant Dawson, Interim Chief Business Officer
Robert Aldama, Purchasing Manager II

ADDENDUM NO. 3

Date: May 6th, 2026

Issued by: Sacramento City Unified School District

Project: **Project #: - 0151-470,0450-470**
Leonardo Da Vinci and Umoja Gym Upgrades and EV Chargers

This addenda shall supersede the original Information, attachments, and specifications regarding **Project No. 0151-470,0450-470** where it adds to, deletes from, clarifies or otherwise modifies them. All other conditions and any previous addenda shall remain unchanged.

Part A – List of Attachments

AD1.01 Hazardous Materials Report, Leonardo Da Vinci & Umoja. Abatement Specifications.

END OF ADDENDUM NO. 3

Acknowledgement of this Addendum will be required at time of bid.

ENTEK
CONSULTING GROUP, INC.
3435 American River Drive, Suite C, Sacramento CA 95864 Phone (916) 632-6800 www.entekgroup.com

May 5, 2026

Mr. Chris Ralston
Assistant Superintendent
Facilities Support Services
Sacramento City Unified School District (SCUSD)
425 1st Avenue
Sacramento, CA 95818

Re: Pre-renovation Hazardous Materials Survey Report – SCUSD – Gym Building at Leonardo Da Vinci K-8 School located at 4701 Joaquin Way in Sacramento, CA 95822

Dear Mr. Ralston,

Entek Consulting Group, Inc. (Entek) is pleased to provide SCUSD with this Pre-renovation Hazardous Materials Survey Report regarding the bulk asbestos and lead samples collected from the Gym Building at Leonardo Da Vinci K-8 School. Mr. Eric McMullen, Project Engineer II with Kitchell CM on behalf of SCUSD requested Entek, to conduct a pre-renovation hazardous materials survey of the Gym Building located within the Leonardo Da Vinci K-8 School campus in preparation for renovation activities. It is Entek's understanding that the gym flooring, bleachers, and concrete walls inside the Main Gym within the Gym Building are planned for renovation. All other interior/exterior areas of the Gym Building were not included in this survey.

On March 26, 2026, Mr. Jose Hernandez conducted the pre-renovation hazardous materials survey. Mr. Hernandez is a Cal/OSHA Certified Asbestos Consultant (CAC) and State of California Department of Public Health (CDPH) certified Lead Inspector/Assessor.

Asbestos Bulk Sampling and Results

The samples of materials suspected of containing asbestos were submitted to Eurofins Built Environment West, LLC (Eurofins), a laboratory located in Folsom, California. These samples were subsequently analyzed by polarized light microscopy (PLM) with dispersion staining. Eurofins is accredited by the National Voluntary Accreditation Program (NVLAP) for this analysis.

The US EPA NESHAP and SMAQMD uses the terms Regulated Asbestos Containing Material (RACM), Category I, and Category II when identifying materials which contain asbestos in amounts greater than 1%. Cal/OSHA uses the term ACCM which indicates a manufactured construction material contains greater than 0.1% asbestos by weight by the PLM method. This definition can be found in Title 8, 1529.

Entek collected two (2) bulk samples of the suspect materials from the Gym Building that are expected to be impacted during the renovation project. Some of those samples contained multiple layers which were individually analyzed to determine their asbestos content. Analysis of all samples collected was by PLM with dispersion staining. Results of the analysis are listed in the following tables:

Suspect Materials Found NOT TO Contain Asbestos				
Sample ID#'s	**Suspect Material**	**EPA AHERA Classification**	**Asbestos Content**	**Location**
10A-B	Concrete Walls	Miscellaneous Material	None Detected	Throughout walls inside the Main Gym

Suspect Materials Found or Known TO Contain >1% Asbestos (CAT-II)				
Sample ID#'s	**Suspect Material**	**Asbestos Content/Type (%) by PLM**	**Location**	**Total Estimated Quantity**
*n/a	All suspect materials below the wood gym floors (sublayers)	ASSUMED >1% Asbestos	Throughout Gym	Approximately 6,600 Sq. Ft.

*The flooring was sampled by a district representative, therefore all documentation regarding the sampling will need to be provided by the district. Since no samples were collected by Entek the flooring materials must be assumed to contain asbestos greater than 1%.

NOTE: Any CAT-I or CAT-II materials identified in the previous tables which will be subjected to mechanical removal, must be considered RACM for the purposes of notification to SMAQMD and classification of waste. Removal of any CAT-I or CAT-II materials prior to demolition of a building is dependent upon how the materials will be impacted and if the impact will cause the materials to become friable. If any remaining CAT-I or CAT-II materials will become friable they must be removed prior to the initiation of demolition.

NOTE: Cal/OSHA regulates all materials containing greater than 0.1% asbestos. As a result, impact to materials identified as ACCM and ACM must be performed by properly asbestos trained personnel utilizing appropriate personal protection, work practices, as well as, properly constructed and demarcated work areas or containments, in accordance with Cal/OSHA asbestos regulations.

All sample numbers noted in the tables above start with ECG-26-8092-

US EPA AHERA uses three terms when determining the classification of a material for the purpose of sampling. These terms include miscellaneous, surfacing, and thermal system insulation (TSI).

Miscellaneous materials are building materials on structural components, structural members, or fixtures, such as floor and ceiling tiles, and do not include surfacing material or TSI.

Surfacing materials are materials that are sprayed-on, troweled-on, or otherwise applied to surfaces, such as acoustical plaster on ceiling and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes.

TSI is material applied to pipes, fittings, boilers, breeching, tanks, ducts, or other structural components to prevent heat loss or gain, water condensation, or for other purposes.

The information provided in the table of this report are for use by the Owner in determining where asbestos containing materials are located, and whether any future work may impact those materials. The information is also provided for use by any contractor who may perform work in areas impacting the materials listed in this report, and for use as appropriate by asbestos abatement contractors to provide costs related to work impacting ACM.

Any building materials which are considered "suspect" for containing asbestos which have not been identified in this report must be assumed to contain asbestos in amounts >1% until properly investigated and/or tested.

Materials commonly excluded from being suspected for containing asbestos include, but are not limited to: unwrapped pink and yellow fiberglass insulating materials or products, foam insulation, wood, metal, plastic, or glass. All other types of building materials or coatings on the materials listed above are commonly listed as “suspect” and must be tested prior to impact by a Contractor. Work impacting these untested or newly discovered materials must cease until an investigation can be completed.

US EPA

The property included in this survey report is located in Sacramento County. The Sacramento Metropolitan Air Quality Management District (SMAQMD) has been given authority for enforcement of the NESHAP regulations by means of their own rules (Rule 902).

A demolition is the wrecking, taking out, or burning of any load supporting structural member. A renovation is everything else. 10 day written notification to the US EPA Region IX and the SMAQMD is required prior to the performance of any demolition project regardless of asbestos being present or not. This notification would also apply to any renovation project which involves the wrecking, taking out, or burning of any load bearing structural member during a renovation as well.

There is a sufficient amount of ACM present to require a 10-day notification to the SMAQMD be submitted prior to starting work which will impact materials identified as RACM or CAT-I and CAT-II materials if they are made friable. If more than 160 square feet, 260 linear feet or 35 cubic feet of RACM is planned for removal on the project, formal written notification to SMAQMD is required.

Cal/OSHA

Disturbance of any ACM or ACCM could generate airborne asbestos fibers and would be regulated by Cal/OSHA. Cal/OSHA worker health and safety regulations apply during any disturbance of ACM or ACCM by a person while in the employ of another. This is true regardless of friability or quantity disturbed. Since it has been estimated that more than 100 square feet of ACCM does exist and will be impacted during the upcoming project, a licensed asbestos contractor registered with Cal/OSHA is required to perform the asbestos related removal work. Entek recommends a licensed asbestos contractor be used to remove ACCM even if less than 100 square feet of ACCM is being disturbed.

For compliance with Title 8, Section 341.9, the asbestos contractor must send written notice at least one day (24 hours) prior to start of any work which will impact any amount of asbestos to the local office for the State of California, Department of Occupational Safety and Health, and perform all work in accordance with Cal/OSHA requirements.

Lead Inspection, Sampling, & Results

A total of one (1) bulk sample was collected from the painted surfaces that had inconclusive XRF results and are expected to be impacted in the upcoming renovation project. The samples were collected and submitted to Eurofins Built Environment West, LLC (Eurofins) located in Tustin, California. The bulk sample was analyzed utilizing the NIOSH 7082 method (including the EPA 7000B and EPA 7420 methods) utilizing flame atomic absorption spectroscopy. Eurofins is accredited by the Environmental Laboratory Accreditation Program (ELAP) to perform the analysis. Results of the XRF analyzer and lab analysis are listed in the following tables and further details are in Appendix B.

Paints/Coatings/ Materials Determined to be Lead Based Paint (LBP)		
Paint/Coating Color or Material	**Lead Content**	**Component/Location**
Blue Paint over Orange Paint	69,300 ppm	Interior Metal L Bracket / Throughout Perimeter Edge of Gym Flooring
Orange Paint	>10 %	Interior Metal Floor Thresholds / Throughout Gym Where Found

LBP - Materials/coatings/paints meeting the definition of lead-based paint as defined by the CDPH and the US EPA, currently defined as containing lead in concentrations equal to or greater than 1.0 mg/cm^2, 5,000 ppm, or 0.5% by weight.

Paints/Coatings/ Materials Determined to be Lead Containing Paint (LCP)		
Paint/Coating Color or Material	**Lead Content (ppm)**	**Component/Location**
Brown Varnish	53	Interior Wood Bleachers / Throughout Gym Building Where Found
Blue Paint	207	Interior Concrete Walls / Throughout Gym Building Where Found

LCP - Materials/coatings/paints which contain measurable amounts of lead. The disturbance of these materials/coatings/paints is regulated by Cal/OSHA.

Paints Determined NOT TO Contain Lead (<39 ppm)	
Paint Color	**Building Component**
Varnish	Interior Wood Floor / Throughout Gym Flooring

Paints determined “NOT TO” contain lead for the purposes of this report are those samples which when analyzed did not indicate lead to be present at or above the reporting limit. The limits of detection was 39 parts per million (ppm). As a result, any paints shown “NOT TO” contain lead will not require any special training or work practices related to lead when impacted.

Lead Regulatory Compliance

Any upcoming project which may result in the disturbance of lead containing products or surfaces but is not intended to remediate a lead hazard or specifically designed to remove LBP to reduce or eliminate a known hazard, would be considered “lead related construction work.”

Lead related construction work does not fit the classification of a “lead abatement project” under CDPH Title 17 regulations. “*Abatement*” is defined in Title 17, Division 1, Chapter 8, Article 1 as “any set of measures designed to reduce or eliminate lead hazards or LBP for public and residential buildings, but does not include containment or cleaning.” A *lead hazard* is defined in Title 17, Division 1, Chapter 8, Article 1 as “deteriorated LBP, lead contaminated dust, lead contaminated soil, disturbing LBP or presumed LBP without containment, or any other nuisance which may result in persistent and quantifiable lead exposure.”

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." (Title 17, California Code of Regulations, Division 1, Chapter 8, Article 1).

Currently, Cal/OSHA has not established a definition for LBP, nor have they established minimum concentrations where their regulations do not apply. Cal/OSHA regulates all construction activities involving materials containing lead, including LBP. These regulations are found in CCR, Title 8 Section 1532.1 (§1532.1) Lead in Construction.

Cal/OSHA has not established a concentration of lead in a product where their regulations do not apply, therefore, any disturbance to products containing lead come under the jurisdiction of Cal/OSHA and their regulations. Disturbance of paints/coatings or materials determined to be LBP may trigger a pre-work notification to Cal/OSHA if "trigger tasks" disturb 100 square feet or more of those paints/coatings or materials. Trigger tasks are described in Title 8 CCR 1532.1.

Limitations

This pre-renovation hazardous materials survey is limited to the flooring and wall systems of the Main Gym inside the Gym Building of the Leonardo Da Vinci K-8 campus located at 4701 Joaquin Way in Sacramento, California.

If any other suspect materials not listed as having been sampled in this or previous reports are discovered, which will be impacted during the project, those materials must be assumed to contain asbestos/lead until properly inspected and tested for asbestos/lead content.

Entek's policy is to retain a full copy of these written documents for three (3) years once the file is closed. At the end of the three (3) year period the written files will be destroyed without further notice. It is suggested copies of the file(s) are maintained as per the District's policy. Entek will be providing only this electronic copy of the report and its attachments for your use. Thank you for choosing Entek for your environmental needs. Please call me at (916) 632-6800 if you have any questions regarding this report.

Sincerely,

Jose Hernandez, CAC, I/A
Project Manager

Reviewed By:

Blake Howes, CAC, I/A
Vice President

Attachments

APPENDIX A

ASBESTOS RELATED DOCUMENTS

- Bulk Asbestos Analysis Report From Eurofins/EMLab
- Bulk Asbestos Material Analysis Request Form for Entek
- Asbestos Bulk Sample Location Drawings
- SMAQMD Asbestos Survey Form
- SMAQMD Demolition/Renovation Form (To be completed by Owner)

Report for:

Jose Hernandez
Entek Consulting Group
3435 American River Drive
Suite C
Sacramento, CA 95864

Regarding: Eurofins Built Environment Testing West, LLC
Project: 26-8092; SCUSD - Leonardo Da Vinci K-8 School. 4701 Joaquin Way, Sacramento, CA
EML ID: 4436165

Approved by:

Approved Signatory
James Schatz

Dates of Analysis:
Asbestos PLM: 03-03-2026

Service SOPs: Asbestos PLM (EPA 40CFR App E to Sub E of Part 763 & EPA 600/R-93-116, EBET-PLM-SOP83921)
NVLAP Lab Code 600255-0

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 and tested. 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 Built Environment Testing West, LLC ("the Company"), a member of the Eurofins Built Environment Testing group of companies, shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins Built Environment Testing West, LLC
180 Blue Ravine Rd, Folsom, CA 95630
(833) 465-5857 www.eurofinsus.com/Built

Client: Entek Consulting Group
C/O: Jose Hernandez
Re: 26-8092; SCUSD - Leonardo Da Vinci K-8 School. 4701 Joaquin Way, Sacramento, CA

Date of Sampling: 02-26-2026
Date of Receipt: 03-02-2026
Date of Report: 03-05-2026

ASBESTOS PLM REPORT

Total Samples Submitted:	20
Total Samples Analyzed:	18
Total Samples with Layer Asbestos Content > 1%:	2

Location: ECG-26-8092-01A, 12"x12" Gray Mottled Vinyl Floor Tile with Yellow Mastic - TK Classroom, Northwest Side of Storage 35A

Lab ID-Version‡: 22269696-1

Sample Layers	Asbestos Content
Gray Floor Tile	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

Location: ECG-26-8092-01B, 12"x12" Gray Mottled Vinyl Floor Tile with Yellow Mastic - East Side of TK Classroom

Lab ID-Version‡: 22269697-1

Sample Layers	Asbestos Content
Gray Floor Tile	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

Location: ECG-26-8092-02A, Blue Carpet with Yellow and Black Mastic - TK Classroom, Northwest Side of Electrical Room 35C

Lab ID-Version‡: 22269698-1

Sample Layers	Asbestos Content
Blue Carpet	ND
Black/Yellow Mastic	3% Chrysotile
Composite Non-Asbestos Content:	50% Synthetic Fibers
Sample Composite Homogeneity:	Good

Comments: 02B not analyzed per client instructions (Positive Stop).

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

All components not quantified as asbestos content and non-asbestos content are considered to be non-fibrous matrix components. Matrix components may include, but are not limited to, gypsum, paint, silicate minerals, vinyl, binder, calcium carbonate, tar, and foam.

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 Built Environment Testing West, LLC
180 Blue Ravine Rd, Folsom, CA 95630
(833) 465-5857 www.eurofinsus.com/Built

Client: Entek Consulting Group
C/O: Jose Hernandez
Re: 26-8092; SCUSD - Leonardo Da Vinci K-8 School. 4701 Joaquin Way, Sacramento, CA

Date of Sampling: 02-26-2026
Date of Receipt: 03-02-2026
Date of Report: 03-05-2026

ASBESTOS PLM REPORT

Location: ECG-26-8092-03A, Gray Speckled Sheet Vinyl Flooring with Tan Mastic - TK Classroom, Southwest Side of Toilet 35C

Lab ID-Version‡: 22269700-1

Sample Layers	Asbestos Content
Gray Sheet Flooring	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

Location: ECG-26-8092-03B, Gray Speckled Sheet Vinyl Flooring with Tan Mastic - TK Classroom, East Side of Toilet 35C

Lab ID-Version‡: 22269701-1

Sample Layers	Asbestos Content
Gray Sheet Flooring	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

Location: ECG-26-8092-04A, Gray Multicolored Carpet with Yellow Mastic - West Side of TK Classroom

Lab ID-Version‡: 22269702-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Yellow Mastic	ND
Composite Non-Asbestos Content:	50% Synthetic Fibers
Sample Composite Homogeneity:	Good

Location: ECG-26-8092-04B, Gray Multicolored Carpet with Yellow Mastic - Southwest Side of TK Classroom

Lab ID-Version‡: 22269703-1

Sample Layers	Asbestos Content
Gray Carpet	ND
Yellow Mastic	ND
Composite Non-Asbestos Content:	50% Synthetic Fibers
Sample Composite Homogeneity:	Good

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

All components not quantified as asbestos content and non-asbestos content are considered to be non-fibrous matrix components. Matrix components may include, but are not limited to, gypsum, paint, silicate minerals, vinyl, binder, calcium carbonate, tar, and foam.

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 Built Environment Testing West, LLC
180 Blue Ravine Rd, Folsom, CA 95630
(833) 465-5857 www.eurofinsus.com/Built

Client: Entek Consulting Group
C/O: Jose Hernandez
Re: 26-8092; SCUSD - Leonardo Da Vinci K-8 School. 4701 Joaquin Way, Sacramento, CA

Date of Sampling: 02-26-2026
Date of Receipt: 03-02-2026
Date of Report: 03-05-2026

ASBESTOS PLM REPORT

Location: ECG-26-8092-05A, 4" Gray Vinyl Base Cove with Beige Mastic - North Wall of TK Classroom

Lab ID-Version‡: 22269704-1

Sample Layers	Asbestos Content
Gray Cove Base	ND
Beige Mastic	ND
Sample Composite Homogeneity:	Good

Location: ECG-26-8092-05B, 4" Gray Vinyl Base Cove with Beige Mastic - South Wall of TK Classroom

Lab ID-Version‡: 22269705-1

Sample Layers	Asbestos Content
Gray Cove Base	ND
Beige Mastic	ND
Sample Composite Homogeneity:	Good

Location: ECG-26-8092-06A, Concrete Masonry Unit Block Wall with Mortar - TK Classroom, North Wall of Storage 35A

Lab ID-Version‡: 22269706-1

Sample Layers	Asbestos Content
Gray Cementitious Material	ND
Gray Grout	ND
Sample Composite Homogeneity:	Good

Location: ECG-26-8092-06B, Concrete Masonry Unit Block Wall with Mortar - North Wall of TK Classroom

Lab ID-Version‡: 22269707-1

Sample Layers	Asbestos Content
Gray Cementitious Material	ND
Gray Grout	ND
Sample Composite Homogeneity:	Good

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

All components not quantified as asbestos content and non-asbestos content are considered to be non-fibrous matrix components. Matrix components may include, but are not limited to, gypsum, paint, silicate minerals, vinyl, binder, calcium carbonate, tar, and foam.

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 Built Environment Testing West, LLC
180 Blue Ravine Rd, Folsom, CA 95630
(833) 465-5857 www.eurofinsus.com/Built

Client: Entek Consulting Group
C/O: Jose Hernandez
Re: 26-8092; SCUSD - Leonardo Da Vinci K-8 School. 4701 Joaquin Way, Sacramento, CA

Date of Sampling: 02-26-2026
Date of Receipt: 03-02-2026
Date of Report: 03-05-2026

ASBESTOS PLM REPORT

Location: ECG-26-8092-07A, 12" Nailed on Ceiling Tile - Northeast Side of TK Classroom

Lab ID-Version‡: 22269708-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

Location: ECG-26-8092-07B, 12" Nailed on Ceiling Tile - Southeast Side of TK Classroom

Lab ID-Version‡: 22269709-1

Sample Layers	Asbestos Content
Brown Ceiling Tile with White Surface	ND
Composite Non-Asbestos Content:	80% Cellulose
Sample Composite Homogeneity:	Good

Location: ECG-26-8092-08A, Concrete Slab - TK Classroom, South Side of Storage 35D

Lab ID-Version‡: 22269710-1

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

Location: ECG-26-8092-08B, Concrete Slab - TK Classroom, North Side of Storage 35D

Lab ID-Version‡: 22269711-1

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

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

All components not quantified as asbestos content and non-asbestos content are considered to be non-fibrous matrix components. Matrix components may include, but are not limited to, gypsum, paint, silicate minerals, vinyl, binder, calcium carbonate, tar, and foam.

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 Built Environment Testing West, LLC
180 Blue Ravine Rd, Folsom, CA 95630
(833) 465-5857 www.eurofinsus.com/Built

Client: Entek Consulting Group
C/O: Jose Hernandez
Re: 26-8092; SCUSD - Leonardo Da Vinci K-8 School. 4701 Joaquin Way, Sacramento, CA

Date of Sampling: 02-26-2026
Date of Receipt: 03-02-2026
Date of Report: 03-05-2026

ASBESTOS PLM REPORT

Location: ECG-26-8092-09A, Drywall with Joint Compound - TK Classroom, Southwest Corner of Toilet 35E

Lab ID-Version‡: 22269712-1

Sample Layers	Asbestos Content
Off-White Joint Compound with Paint	2% Chrysotile
White Drywall with Brown Paper	ND
Composite Non-Asbestos Content:	10% Cellulose
Sample Composite Homogeneity:	Good

Comments: 09B not analyzed per client instructions (Positive Stop).

Location: ECG-26-8092-10A, Concrete Wall - West Wall of Gym

Lab ID-Version‡: 22269714-1

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

Location: ECG-26-8092-10B, Concrete Wall - West Wall of Gym

Lab ID-Version‡: 22269715-1

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

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

All components not quantified as asbestos content and non-asbestos content are considered to be non-fibrous matrix components. Matrix components may include, but are not limited to, gypsum, paint, silicate minerals, vinyl, binder, calcium carbonate, tar, and foam.

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 Built Environment Testing West, LLC
180 Blue Ravine Rd, Folsom, CA 95630
(833) 465-5857 www.eurofinsus.com/Built

Client: Entek Consulting Group
C/O: Jose Hernandez
Re: 26-8092; SCUSD - Leonardo Da Vinci K-8 School. 4701 Joaquin Way, Sacramento, CA

Date of Sampling: 02-26-2026
Date of Receipt: 03-02-2026
Date of Report: 03-05-2026

ASBESTOS PLM REPORT

Total Samples Submitted:	20
Total Samples Analyzed:	18
Total Samples Not Analyzed:	2

ECG-26-8092-02B, Blue Carpet with Yellow and Black Mastic - TK Classroom, Northwest Side of Storage 35B Lab ID-Version‡: 22269699-0

NOT ANALYZED	**POSITIVE STOP**

ECG-26-8092-09B, Drywall with Joint Compound - TK Classroom, Southwest Corner of Storage 35A Lab ID-Version‡: 22269713-0

NOT ANALYZED	**POSITIVE STOP**

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Sample results described as "Positive Stop" were not analyzed because the previous sample layer(s) contained asbestos >1%. Sample results described as "Sample Bag Empty" were not analyzed because while the sample bag was submitted it did not contain a discernible sample. Sample results described as "No Sample Submitted" were not analyzed because the sample bag was not submitted with the project. Sample results described as "Insufficient Sample" were not analyzed because while the sample was submitted for analysis, there was insufficient material present to analyze the sample confidently. Sample results described as "Per Client Request" were submitted to the laboratory but not analyzed because the laboratory was requested to hold the sample.

‡ 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 Built Environment Testing West, LLC
180 Blue Ravine Rd, Folsom, CA 95630
(833) 465-5857 www.eurofinsus.com/Built

Client: Entek Consulting Group
C/O: Jose Hernandez
Re: 26-8092; SCUSD - Leonardo Da Vinci K-8 School. 4701 Joaquin Way, Sacramento, CA

Date of Sampling: 02-26-2026
Date of Receipt: 03-02-2026
Date of Report: 03-05-2026

ASBESTOS PLM REPORT

PROJECT ANALYST AND SIGNATORY REPORT

Project Analyst

Analyst: Samantha Pierce

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

‡ 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".

CHAIN OF CUSTODY

www.eurofinsus.com/Built

ENTEK CONSULTING GROUP, INC.

Weather		Fog	Rain	Snow	Wind	Clear
Level	None	☒	☒	☒	☒	☐
	Light	☐	☐	☐	☐	
	Moderate	☐	☐	☐	☐	
	Heavy	☐	☐	☐	☐	

EMLab ID 4436165

New Jersey: 3000 Lincoln Drive East, Suite A, Marlton, NJ 08053 * **(866) 871-1984**
Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * **(800) 651-4802**
Burlingame, CA: 111 Anza Blvd., Suite 122, Burlingame, CA 94010 * **(833) 465-5857**

CONTACT INFORMATION

Company:	Entek Consulting Group (9697)	Address:	3435 American River Drive Suite C Sacramento, CA 95864
Contact:	Jose Hernandez	Special Instructions:	Stop analysis upon first positive result (1%) for sample in a series. Also stop analysis upon first positive result (1%) in the joint compound for sample series.
Phone:	916-824-5580		

PROJECT INFORMATION

Project ID:	26-8092		
Project Description:	SCUSD - Leonardo Da Vinci K-8 School. 4701 Joaquin Way, Sacramento, CA		
Project Zip Code:	95822	Sampling Date & Time:	02/26/2026 01:30 PM
PO Number:	26-8092	Sampled By:	Jose Hernandez

TURN AROUND TIME CODES (TAT)

STD – Standard (DEFAULT)
ND – Next Business Day
SD –Same Business Day Rush
WH – Weekend / Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

REQUESTED SERVICE

(Use checkboxes below)

Sample ID	Description	Sample Type (Below)	TAT (Above)	Volume / Area (as applicable)	ISO Class (as applicable)	Notes (Time of day, Temp, RH, etc.)	Asbestos PLM					
ECG-26-8092-01A	12"x12" Gray Mottled Vinyl Floor Tile with Yellow Mastic - TK Classroom, Northwest Side of Storage 35A	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-01B	12"x12" Gray Mottled Vinyl Floor Tile with Yellow Mastic - East Side of TK Classroom	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-02A	Blue Carpet with Yellow and Black Mastic - TK Classroom, Northwest Side of Electrical Room 35C	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-02B	Blue Carpet with Yellow and Black Mastic - TK Classroom, Northwest Side of Storage 35B	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-03A	Gray Speckled Sheet Vinyl Flooring with Tan Mastic - TK Classroom, Southwest Side of Toilet 35C	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-03B	Gray Speckled Sheet Vinyl Flooring with Tan Mastic - TK Classroom, East Side of Toilet 35C	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-04A	Gray Multicolored Carpet with Yellow Mastic - West Side of TK Classroom	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-04B	Gray Multicolored Carpet with Yellow Mastic - Southwest Side of TK Classroom	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-05A	4" Gray Vinyl Base Cove with Beige Mastic - North Wall of TK Classroom	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-05B	4" Gray Vinyl Base Cove with Beige Mastic - South Wall of TK Classroom	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-06A	Concrete Masonry Unit Block Wall with Mortar - TK Classroom, North Wall of Storage 35A	B	STD	N/A			☒	☐	☐	☐	☐	☐

SAMPLE TYPE CODES		RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
B - Bulk sample		Jose Hernandez	3/2/2026 2:44 PM	Renee Reyes, Analyst	3/2/2026 3:32 PM

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at:
https://www.eurofinsus.com/environment-testing/built-environment/resources/sampling-guides-and-forms/

Copyright © 2024 Eurofins EPK Built Environment Testing, LLC

CHAIN OF CUSTODY

www.eurofinsus.com/Built

ENTEK CONSULTING GROUP, INC.

Weather		Fog	Rain	Snow	Wind	Clear
Level	None	☒	☒	☒	☒	☐
	Light	☐	☐	☐	☐	
	Moderate	☐	☐	☐	☐	
	Heavy	☐	☐	☐	☐	

EMLab ID: 4436165

New Jersey: 3000 Lincoln Drive East, Suite A, Marlton, NJ 08053 * **(866) 871-1984**
Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * **(800) 651-4802**
Burlingame, CA: 111 Anza Blvd., Suite 122, Burlingame, CA 94010 * **(833) 465-5857**

CONTACT INFORMATION

Company:	Entek Consulting Group (9697)	Address:	3435 American River Drive Suite C Sacramento, CA 95864
Contact:	Jose Hernandez	Special Instructions:	Stop analysis upon first positive result (1%) for sample in a series. Also stop analysis upon first positive result (1%) in the joint compound for sample series.
Phone:	916-824-5580		

PROJECT INFORMATION

Project ID:	26-8092		
Project Description:	SCUSD - Leonardo Da Vinci K-8 School. 4701 Joaquin Way, Sacramento, CA		
Project Zip Code:	95822	Sampling Date & Time:	02/26/2026 01:30 PM
PO Number:	26-8092	Sampled By:	Jose Hernandez

TURN AROUND TIME CODES (TAT)

STD – Standard (DEFAULT)
ND – Next Business Day
SD –Same Business Day Rush
WH – Weekend / Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

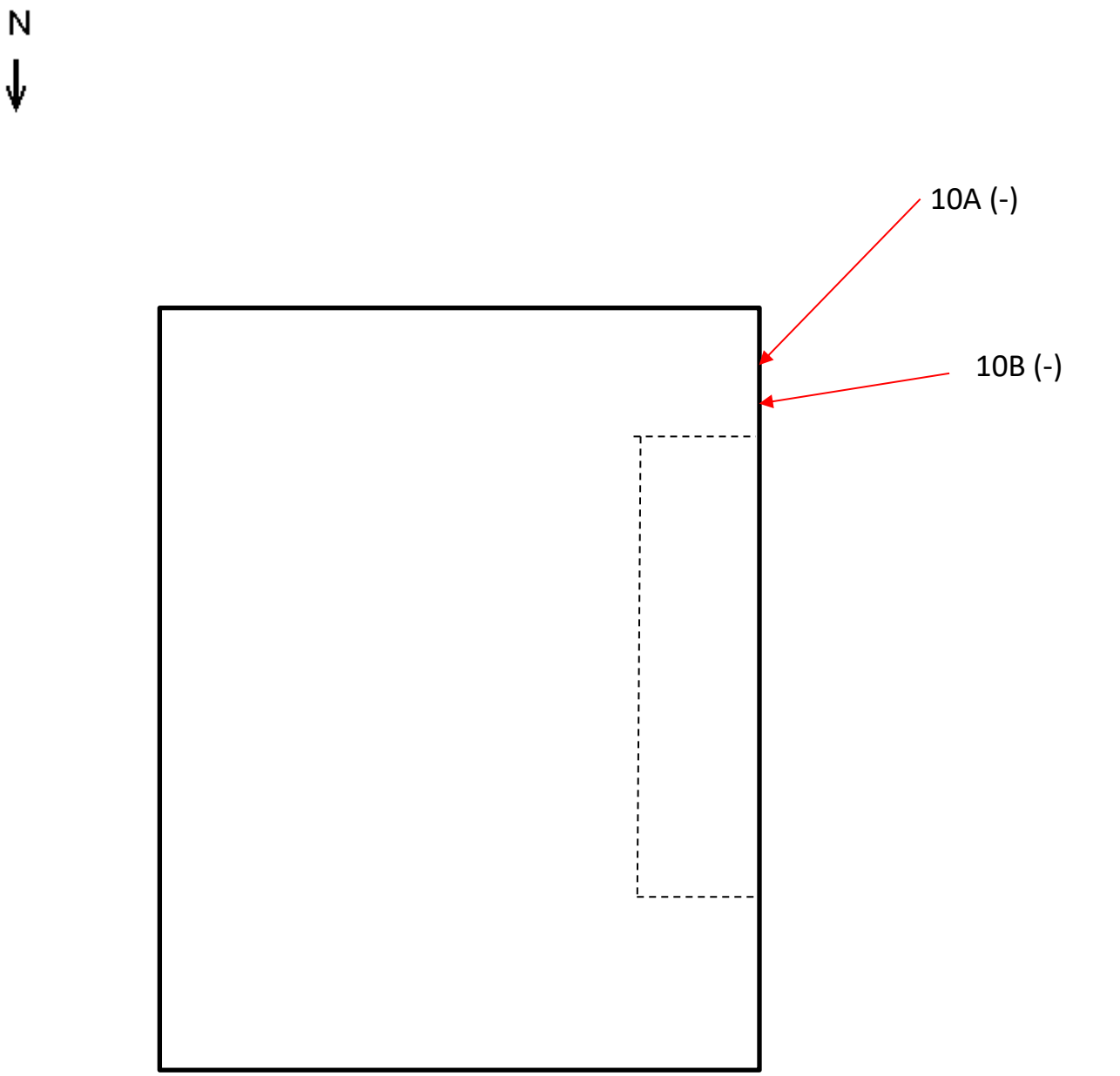
REQUESTED SERVICE

(Use checkboxes below)

Sample ID	Description	Sample Type (Below)	TAT (Above)	Volume / Area (as applicable)	ISO Class (as applicable)	Notes (Time of day, Temp, RH, etc.)	Asbestos PLM					
ECG-26-8092-06B	Concrete Masonry Unit Block Wall with Mortar - North Wall of TK Classroom	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-07A	12" Nailed on Ceiling Tile - Northeast Side of TK Classroom	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-07B	12" Nailed on Ceiling Tile - Southeast Side of TK Classroom	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-08A	Concrete Slab - TK Classroom, South Side of Storage 35D	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-08B	Concrete Slab - TK Classroom, North Side of Storage 35D	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-09A	Drywall with Joint Compound - TK Classroom, Southwest Corner of Toilet 35E	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-09B	Drywall with Joint Compound - TK Classroom, Southwest Corner of Storage 35A	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-10A	Concrete Wall - West Wall of Gym	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8092-10B	Concrete Wall - West Wall of Gym	B	STD	N/A			☒	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐

SAMPLE TYPE CODES	RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
B - Bulk sample	Jose Hernandez	3/2/2026 2:44 PM	Renee Reyes, Analyst	3/2/2026 3:32 PM

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at:
https://www.eurofinsus.com/environment-testing/built-environment/resources/sampling-guides-and-forms/
Copyright © 2024 Eurofins EPK Built Environment Testing, LLC



Sacramento City USD Leonardo Da Vinci Elementary School, Gym 4701 Joaquin Way Sacramento, CA 95822	Entek Consulting Group, Inc. 3435 American River Dr, Ste C Sacramento, CA 95864 Map Not to Scale	Asbestos Bulk Sample Locations Collected by Jose Hernandez On February 26, 2026 Project Number 26-8092

Asbestos Survey Form

(See Instructions)

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

777 12th Street, 3rd Floor
Sacramento, CA 95814
Office (916) 874-4800
Fax (916) 874-4899
Email:
asbestos@airquaility.org

1. Purpose of Survey	✔ **Renovation**	☐ **Demolition**

2. Facility Information

Project Area(s) Description: Leonardo Da Vinci K-8 School - Gym Project		
Address: 4701 Joaquin Way	City: Sacramento	# of Structures: 1

3. Owner Information

Name: Sacramento City Unified School District			
Address: 425 1st Avenue		City/State: Sacramento	Zip: 95817
Contact: Chris Ralston	Phone: (916) 395-3970	Fax:	Email: Chris-ralston@scusd.edu

4. Consultant Information — **Survey Date(s):** 02/26/2026

Company Name: Entek Consulting Group, Inc.			
Name: Jose Hernandez			DOSH #: 22-6995
Address: 3435 American River Drive, Suite C		City/State: Sacramento, California	Zip: 95864
Phone: (916) 632-6800	Fax:	Email: jhernandez@entekgroup.com	Signature:

5. Client Information (If different than owner) ☐ **General Contractor** ☐ **Insurance Company** ☐ **Architect** ☐ **Property Manager** ☐ **Other** _____

Name			
Address		City/State	Zip
Contact	Phone	Fax	Email

6. Have all of the suspect materials that will be disturbed been sampled? ■ Yes ☐ No

If no, explain why:
The gym flooring was sampled by a district employee. Please refer to the district's documentation for pe

7. Summary of Total Asbestos Containing Material (ACM) Findings

Regulated Asbestos Containing Material (RACM) (Includes materials subject to known mechanical removal and fire damaged materials)			**Category II**		**Category I**	
Square Ft.	Linear Ft.	Cubic Ft.	Square Ft.	Linear Ft.	Square Ft.	Linear Ft.
0	0	0	6,600	0	0	0

To receive future SMAQMD Rule updates and changes affecting your industry (check one box):

☐ Please send e-mail notices to ☐ I will sign up myself at www.airquality.org/listserve/ to receive emailed notices.

■ I am already subscribed. ☐ I want the District to mail notices to the address on this application: ☐ Owner ☐ Consultant

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Asbestos Renovation/Demolition Notification Form

777 12th Street, 3rd Floor
Sacramento, CA 95814
Office (279) 207-1122
Fax (279) 207-1144
Asbestos@airquality.org

1	Building Department Permit Application # (if known) : _____	☑ Renovation (Do not complete Section 5) ☐ Demolition (Complete all sections) ☐ Ordered Demo - Attach ordered demo letter ☐ Emergency Demo - SMAQMD Emergency #: _____

2	Contractor	Owner Sacramento City Unified School District-Chris Ra
	Address	Address 425 1st Avenue
	City, State / Zip	City, State / Zip Sacramento, CA 95818
	Email	Email Chris-ralston@scusd.edu
	Telephone	Telephone (916) 395-3970

3	Structure Name Leonardo Da Vinci K-8 School	Renovation Area Gym	# of Floors 1
	Project Address 4701 Joaquin Way	City / Zip Sacramento/95822	Year Built Unknown

4	**Preference for return of form**	☐ **E-mail :**	☐ **Other :**

DEMOLITION ONLY – Start date must be at least 10 working days from the day of your postmark or hand delivery of this form.

5	Start Date _____ _____ _____ Completion Date _____ _____ _____	Revision # 1 2 3 4 5 6 7 8 9 (circle) New Start Date _____ _____ _____ New Completion Date _____ _____ _____
	Method of Demo (Check Applicable): ☐Manual/Hand Tools ☐Mechanical/Heavy Equipment ☐Other	
	Procedure to be followed if RACM is found or Category II material becomes friable:	

I have read and understand the directions. The information on this form is true and accurate.
I certify that the asbestos survey conducted represents the facility as built.

6	Applicant Name (Print)	☐ Owner ☐ Rep / Agent ☐ Contractor	**Permit may be issued on:**
	Phone Number		
	Applicant's Signature	Date	

Have DOSH Consultant complete and sign below OR attach completed Asbestos Survey Form and Consultant's report.

CONSULTANT USE ONLY	Company Name Entek Consulting Group, Inc.		Telephone (916) 632-6800	
	Surveyor Name Jose Hernandez		DOSH # 22-6995	Survey Date 02/26/2026
	Analytical Method PLM by Dispersion Staining		Pt Count Materials <10%? ☐Yes ☑ No ☐ Declined by Client	
	Amount of RACM	Square Feet 0	Linear Feet 0	Cubic Feet 0
	Amount of Category I 0		Amount of Category II 6,600	
	Project Address 4701 Joaquin Way		City Sacramento	Zip 95822
	Suspect Materials Present? ☑Yes ☐ No		Consultant's Signature	

SMAQMD USE ONLY

Date Received / Date Postmarked _____ Date Approved & Returned _____

Project # _____ Check # _____ Receipt # _____ Amount Paid _____ Staff _____

APPENDIX B

LEAD RELATED DOCUMENTS

- Lead in Paint Samples Analysis Report From Eurofins/EMLab
- Bulk Lead Material Analysis Request Form for Entek
- Lead Bulk Sample Location Drawings
- Lead XRF Reading
- Lead Hazard Evaluation Report (CDPH 8552)

Report for:

Jose Hernandez
Entek Consulting Group
3435 American River Drive
Suite C
Sacramento, CA 95864

Regarding: Eurofins Built Environment Testing West, LLC
Project: 26-8092; SCUSD - Leonardo Da Vinci K-8 School. 4701 Joaquin Way, Sacramento, CA
EML ID: 4436173

Approved by:

Approved Signatory
Philip Newton

Dates of Analysis:
Lead - Flame AA: 03-10-2026

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

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested. Sample size, as it relates to Wipe samples only, is supplied by the client.

Eurofins Built Environment Testing West, LLC ("the Company"), a member of the Eurofins Built Environment Testing group of companies, shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.
Eurofins Built Environment Testing West, LLC's LabServe® reporting system includes automated fail-safes to ensure that all AIHA LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Eurofins Built Environment Testing West, LLC
2841 Dow Avenue, Suite 300, Tustin, CA 92780
(833) 465-5857 www.eurofinsus.com/Built

Client: Entek Consulting Group
C/O: Jose Hernandez
Re: 26-8092; SCUSD - Leonardo Da Vinci K-8 School. 4701 Joaquin Way, Sacramento, CA

Date of Sampling: 02-26-2026
Date of Receipt: 03-05-2026
Date of Report: 03-11-2026

LEAD: FLAME ATOMIC ABSORPTION SPECTROMETRY

Location:	ECG-26-8092-01Pb: Varnish on Wood Gym Floor - Southwest Side of Gym
Comments (see below)	None
Lab ID-Version‡:	22269903-1
Analysis Date:	03/10/2026
Sample type	Paint Chip sample
Method*	NIOSH 7082 & EPA 7000B modified
† Method Reporting Limit	39 ppm
Sample size	0.2570 grams
§Total Lead Result	< 39 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.

Estimated accuracy is solely based on recovery data from internal laboratory control samples at the 95% confidence interval (k ~ 2) of the level of concern, derived from a 1,000-ppm certified lead reference.

*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".

Eurofins Built Environment Testing West, LLC
2841 Dow Avenue, Suite 300, Tustin, CA 92780
(833) 465-5857 www.eurofinsus.com/Built

Client: Entek Consulting Group
C/O: Jose Hernandez
Re: 26-8092; SCUSD - Leonardo Da Vinci K-8 School. 4701 Joaquin Way, Sacramento, CA

Date of Sampling: 02-26-2026
Date of Receipt: 03-05-2026
Date of Report: 03-11-2026

LEAD: FLAME ATOMIC ABSORPTION SPECTROMETRY

PROJECT ANALYST AND SIGNATORY REPORT

Project Analyst

Analyst: Alex Nguyen

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by AIHA LAP, LLC, or any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

‡ 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".

CHAIN OF CUSTODY

www.eurofinsus.com/Built

ENTEK CONSULTING GROUP, INC.

Weather		Fog	Rain	Snow	Wind	Clear
Level	None	☒	☒	☒	☒	☐
	Light	☐	☐	☐	☐	
	Moderate	☐	☐	☐	☐	
	Heavy	☐	☐	☐	☐	

EMLab ID
4436173

New Jersey: 3000 Lincoln Drive East, Suite A, Marlton, NJ 08053 * **(866) 871-1984**
Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * **(800) 651-4802**
Burlingame, CA: 111 Anza Blvd., Suite 122, Burlingame, CA 94010 * **(833) 465-5857**

CONTACT INFORMATION

Company:	Entek Consulting Group (9697)	Address:	3435 American River Drive Suite C Sacramento, CA 95864
Contact:	Jose Hernandez	Special Instructions:	
Phone:	916-824-5580		

PROJECT INFORMATION

Project ID:	26-8092		
Project Description:	SCUSD - Leonardo Da Vinci K-8 School. 4701 Joaquin Way, Sacramento, CA		
Project Zip Code:	95822	Sampling Date & Time:	02/26/2026 01:30 PM
PO Number:	26-8092	Sampled By:	Jose Hernandez

TURN AROUND TIME CODES (TAT)

STD – Standard (DEFAULT)
ND – Next Business Day
SD –Same Business Day Rush
WH – Weekend / Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

REQUESTED SERVICES

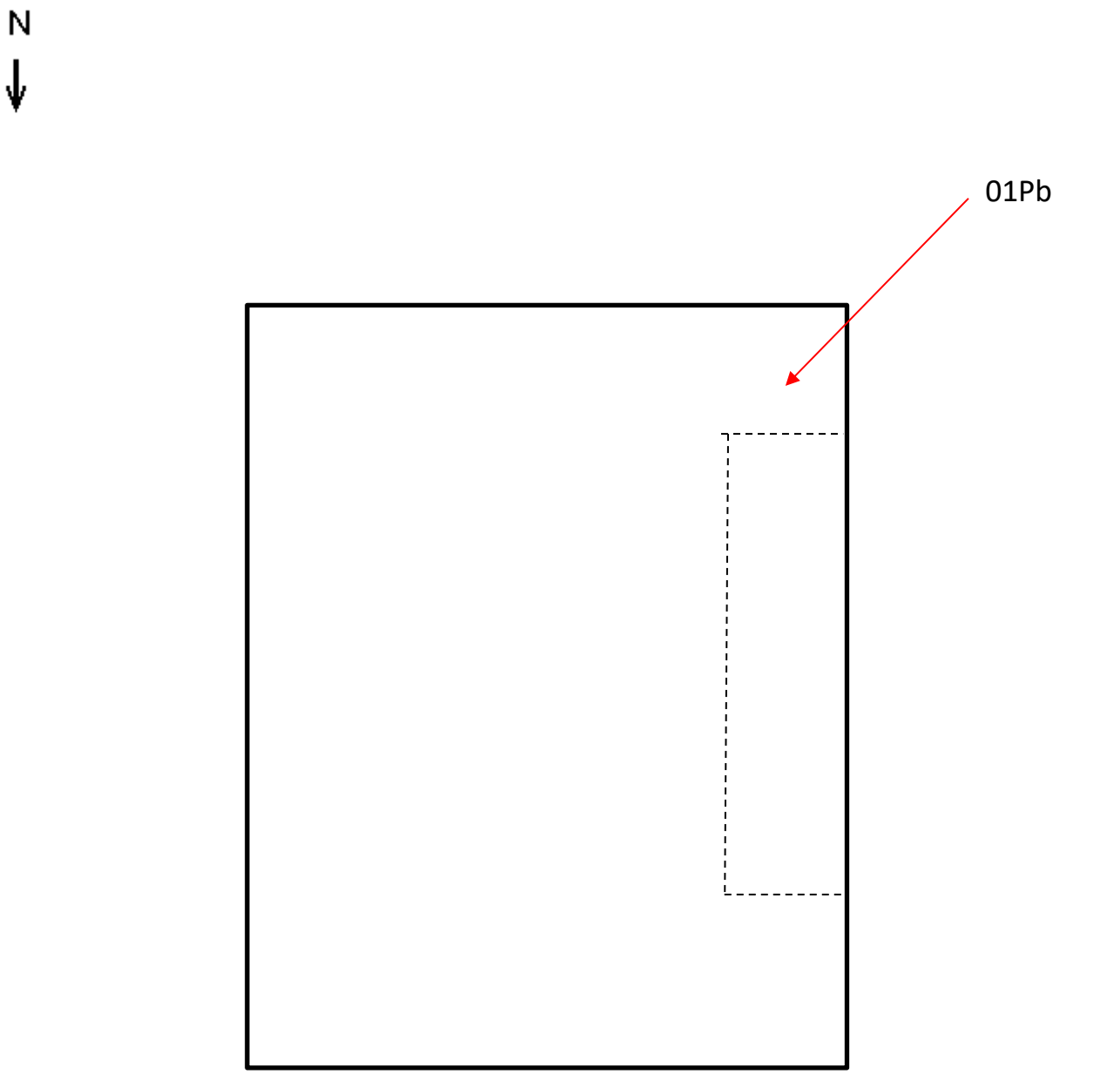
(Use checkboxes below)

Sample ID	Description	Sample Type (Below)	TAT (Above)	Volume / Area (as applicable)	ISO Class (as applicable)	Notes (Time of day, Temp, RH, etc.)	Lead - Flame AA					
ECG-26-8092-01Pb	Varnish on Wood Gym Floor - Southwest Side of Gym	P	STD	N/A			☒	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐

SAMPLE TYPE CODES		RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
P - Paint Chip sample		Jose Hernandez	3/2/2026 2:48 PM	Armando Isais, Lab Support	3/5/2026 9:30 AM

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at:
https://www.eurofinsus.com/environment-testing/built-environment/resources/sampling-guides-and-forms/

Copyright © 2024 Eurofins EPK Built Environment Testing, LLC



Sacramento City USD Leonardo Da Vinci Elementary School, Gym 4701 Joaquin Way Sacramento, CA 95822	Entek Consulting Group, Inc. 3435 American River Dr, Ste C Sacramento, CA 95864 Map Not to Scale	Lead Bulk Sample Locations Collected by Jose Hernandez On February 26, 2026 Project Number 26-8092

Date	Test #	Unit type	Calibration	Lead Result	Margin of Error	Description
2/26/2026 15:56	602	mg/cm2	PCS Cal	1	0.1	
2/26/2026 15:56	603	mg/cm2	PCS Cal	1.1	0.1	
2/26/2026 15:56	604	mg/cm2	PCS Cal	1.1	0.1	
2/26/2026 15:57	605	mg/cm2	PCS Cal	1.1	0.1	
2/26/2026 15:57	606	mg/cm2	LeadPaint	0.1	0.1	
2/26/2026 15:58	607	mg/cm2	LeadPaint	0.1	0.1	
2/26/2026 15:58	608	mg/cm2	LeadPaint	0.1	0.1	
2/26/2026 15:58	609	mg/cm2	LeadPaint	0.1	0.1	
2/26/2026 15:59	610	%	Soil	0.1	0.01	
2/26/2026 16:01	611	%	Soil	0.15	0.01	
2/26/2026 16:03	612	%	Soil	0.24	0.01	
2/26/2026 16:06	613	%	Soil	>10%		
2/26/2026 16:22	614	mg/cm2	PCS Cal	1.1	0.1	
2/26/2026 16:22	615	mg/cm2	PCS Cal	1.1	0.1	
2/26/2026 16:22	616	mg/cm2	PCS Cal	1	0.1	
2/26/2026 16:22	617	mg/cm2	PCS Cal	1.1	0.1	
2/26/2026 16:23	618	mg/cm2	LeadPaint	0	0.1	
2/26/2026 16:24	619	%	Soil	ND	< 0.01	
2/26/2026 16:25	620	%	Soil	ND	< 0.01	
2/26/2026 16:27	621	%	Soil	69,000 ppm	0.14	Blue over Orange paint on metal L corner floor base - Gym
2/26/2026 16:28	622	%	Soil	53 ppm	0.01	Brown varnish on wood bleachers - Gym
2/26/2026 16:29	623	%	Soil	207 ppm	0.01	Blue paint on concrete walls - Gym
2/26/2026 16:31	624	%	Soil	>10%		Orange paint on metal floor thresholds - Gym

LEAD HAZARD EVALUATION REPORT

Section 1 — Date of Lead Hazard Evaluation 02/26/2026

Section 2 — Type of Lead Hazard Evaluation (Check one box only)

- [x] Lead Inspection
- [ ] Risk assessment
- [ ] Clearance Inspection
- [ ] Other (specify) _____

Section 3 — Structure Where Lead Hazard Evaluation Was Conducted

Address [number, street, apartment (if applicable)]	City	County	Zip Code
4701 Joaquin Way - Gym	Sacramento	Sacramento	95822

Construction date (year) of structure: Unknown

Type of structure:
- [ ] Multi-unit building
- [x] School or daycare
- [ ] Single family dwelling
- [ ] Other _____

Children living in structure?
- [ ] Yes
- [x] No
- [ ] Don't Know

Section 4 — Owner of Structure (if business/agency, list contact person)

Name	Telephone number
Sacramento City Unified School DIstrict - Chris Ralston	(916) 395-3970

Address [number, street, apartment (if applicable)]	City	State	Zip Code
425 1st Avenue	Sacramento	California	95818

Section 5 — Results of Lead Hazard Evaluation (check all that apply)

- [ ] No lead-based paint detected
- [x] Intact lead-based paint detected
- [ ] Deteriorated lead-based paint detected
- [ ] No lead hazards detected
- [ ] Lead-contaminated dust found
- [ ] Lead-contaminated soil found
- [x] Other intact lead-containing paint detected

Section 6 — Individual Conducting Lead Hazard Evaluation

Name	Telephone number
Entek Consulting Group, Inc. - Jose Hernandez	(916) 632-6800

Address [number, street, apartment (if applicable)]	City	State	Zip Code
3435 American River Drive, Suite C	Sacramento	CA	95864

CDPH certification number	Signature	Date
10754		04/15/2026

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

N/A

Section 7 — Attachments

A. A foundation diagram or sketch of the structure indicating the specifc locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

APPENDIX C

BACK UP DOCUMENTS

- Site Map
- Inspector Accreditations and Certifications
- Laboratory Accreditations for Asbestos and Lead Analysis

N

Sacramento City USD Leonardo Da Vinci Elementary School, 4701 Joaquin Way Sacramento, CA 95822	Entek Consulting Group, Inc. 3435 American River Dr, Ste C Sacramento, CA 95864 Map Not to Scale	Site Map Project Number 26-8092

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 600397-0

Eurofins Built Environment Testing West- Sacramento, CA

Folsom, CA

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique on ISO/IEC 17025).

2025-10-01 through 2026-09-30

Effective Dates

For the National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Eurofins Built Environment Testing West- Sacramento, CA
180 Blue Ravine Road
Folsom, CA 95630
Kuan W. Chen
Phone: 415-377-0751
Email: kuan.chen@et.eurofinsus.com
http://www.emlab.com

ASBESTOS FIBER ANALYSIS **NVLAP LAB CODE 600397-0**

Bulk Asbestos Analysis

Code	***Description***
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

For the National Voluntary Laboratory Accreditation Program

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

Eurofins Built Environment Testing West- Tustin, CA
Eurofins Built Environment Testing West, LLC
2841 Dow Ave Suite 300 Tustin, CA 92780
Laboratory ID: LAP-178697

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs, LLC (AIHA LAP) accreditation to the ISO/IEC 17025:2017 international standard, General Requirements for the Competence of Testing and Calibration Laboratories in the following:

LABORATORY ACCREDITATION PROGRAMS

☑	**INDUSTRIAL HYGIENE**	Accreditation Expires: January 01, 2028
☑	**ENVIRONMENTAL LEAD**	Accreditation Expires: January 01, 2028
☑	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: January 01, 2028
☐	**FOOD**	Accreditation Expires:
☐	**UNIQUE SCOPES**	Accreditation Expires:
☐	**BE FIELD/MOBILE**	Accreditation Expires:

Specific Field(s) of Testing/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached Scope of Accreditation. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2017 and AIHA LAP requirements. This certificate is not valid without the attached Scope of Accreditation. Please review the AIHA LAP website (www.aihaaccreditedlabs.org) for the most current Scope.

Olena Bulgakova

Olena Bulgakova
Accreditation Director, AIHA Laboratory Accreditation Programs, LLC

Revision22: 12/01/2025

Date Issued: 01/01/2026

AIHA Laboratory Accreditation Programs, LLC

SCOPE OF ACCREDITATION

Eurofins Built Environment Testing West- Tustin, CA

Eurofins Built Environment Testing West, LLC
2841 Dow Ave Suite 300 Tustin, CA 92780

Laboratory ID: LAP-178697

Issue Date: 01/01/2026

Expire Date: 01/01/2028

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air and composited wipes analyses are not included as part of the NLLAP.

Environmental Lead Laboratory Accreditation Program (ELLAP)

Initial Accreditation Date: 03/01/2017

Component, parameter, characteristic, material, or product tested	Technology sub-type/Detector	Method	Method Description *(for internal methods only)*
Paint	AA	EPA SW-846 7000B Modified	N/A
		NIOSH 7082	N/A
Settled Dust by Wipe	AA	EPA SW-846 7000B Modified	N/A
		NIOSH 7082	N/A

A complete listing of currently accredited ELLAP laboratories is available on the AIHA LAP, LLC website at: *http://www.aihaaccreditedlabs.org*

ASBESTOS REQUIREMENTS
TABLE OF CONTENTS

SECTION 1. ASBESTOS BIDDING REQUIREMENTS. 1
Part 1.1 - Site Investigations. 1
Part 1.2 - Insurance Requirements. 1
Part 1.3 - Licenses and Qualifications Requirements. 2

SECTION 2. ASBESTOS GENERAL REQUIREMENTS - DEFINITIONS. 2

SECTION 3. NOTIFICATIONS, SUBMISSIONS, POSTINGS. 8
Part 3.1 - Notification. 8
Part 3.2 - Pre-Construction Submittals.. 8
Part 3.3 - Submittals During the Work Process. 11
Part 3.4 - On-Site/Clean-Room Area Postings and Documentation. 11
Part 3.5 - Job Site Documents. 12
Part 3.6 - Project Close-out Documents.. 12

SECTION 4. SITE SECURITY. 12

SECTION 5. EMERGENCY PLANNING.. 13

SECTION 6. PRE-CONSTRUCTION MEETING. 14

SECTION 7. MATERIALS AND EQUIPMENT. 14
Part 7.1 - Contractor Equipment and Supplies.. 14
Part 7.2 - Rental Equipment and Supplies. 15

SECTION 8. WORK SITE FACILITIES.. 16

SECTION 9. RESPIRATORY PROTECTION.. 16

SECTION 10. PERSONNEL PROTECTION REQUIREMENT AND TRAINING. 20

SECTION 11. WORKER DECONTAMINATION ENCLOSURE SYSTEMS.. 20

SECTION 12. WORKPLACE ENTRY AND EXIT PROCEDURES.. 22

SECTION 13. DIFFERENTIAL AIR PRESSURE SYSTEMS. 22
Part 13.1 - Negative Pressure Requirements. 22
Part 13.2 - DOP Testing.. 23
Part 13.3 - Differential Pressure Recording Requirements. 23
Part 13.4 - Differential Pressure System. 24

SECTION 14. EXECUTION, WORK SCHEDULE. 25
Part 14.1 - Execution. 25
Part 14.2 - Power Outage Procedures. 28
Part 14.3 - Work Schedule.. 29

SECTION 15. REMOVAL PROCEDURES. 29

SECTION 16. WASTE CONTAINER PASS-OUT PROCEDURES. 30

SECTION 17. CLEAN-UP PROCEDURE.. 30
Part 17.1 - Clean-up Procedure. 30
Part 17.2 - Visual Clearance Criteria. 31

ASBESTOS REQUIREMENTS
TABLE OF CONTENTS

SECTION 18. CLEARANCE AIR MONITORING. 32

SECTION 19. MONITORING. 32

SECTION 20. DISPOSAL PROCEDURES. 33
Part 20.1 - Disposal Procedures. 33
Part 20.2 - Transportation to the Landfill. 34
Part 20.3 - Disposal at the Landfill. 34

SECTION 21. PATENTS AND PREVAILING WAGES. 35
Part 21.1 - Patents. 35
Part 21.2 - Prevailing Wage Requirements. 35

SECTION 22. PERMITS AND FEES. 35

SECTION 23. SPECIFIC PROCEDURES AND REQUIREMENTS. 35
Part 23.1 - General Repair of Damaged or Removal of Thermal System Insulation (TSI) 35
Part 23.2 - Glove Bag Technique Requirements. 36
Part 23.3 - Mini-Cube Enclosure Requirements.. 37
Part 23.4 - Roofing and HVAC Caulking Abatement Requirements. 39
Part 23.5 - Vinyl Floor Tile (VFT) & Associated Adhesive Abatement Requirements. . . 39
Part 23.6 - Carpet Removal over Vinyl Floor Tile (VFT)/Tile Adhesive Requirements. . 42
Part 23.7 - Sheetrock and Joint Compound Abatement Requirements. 43
Part 23.8 - Wood Floor & Associated Sublayers Removal Requirements. 45
Part 23.9 - Impact to and Removal of Transite Pipe, Shingle, or Sheeting Materials. . . 46
Part 23.10- Demolition with Selected Asbestos Containing Materials Left in Place. . . . 47
Part 23.11 - Contaminated Attic Space Procedures. 47
Part 23.12 - Non-Friable, Non-Hazardous, Glazing Abatement Requirements. 48
Part 23.13 - Subfloor Crawl Space Dirt Removal Requirements. 48
Part 23.14 - Subfloor Enclosure Requirements. 48
Part 23.15 - Installation of “Rat Slab” in Sublfoor Crawl Space Requirements. 48
Part 23.16 - Stucco/Texture/Plaster Removal and Containment Requirements. 48
Part 23.17 - Fireproofing and Cementitious Texture Plaster Abatement Requirements 49

SECTION 24. ASBESTOS SPECIFICATIONS/PROCEDURES. 50
Part 24.1 - Contacts. 50
Part 24.2 - Removal Locations. 50
Part 24.3 - Materials to be Abated. 51
Part 24.4 - Containment and Abatement Requirements. 51
Part 24.5 - Contractor Assist Requirements.. 52
Part 24.6 - Worker Protection. 52
Part 24.7 - Electrical and Water Hook-Ups. 52
Part 24.8 - Visual and Air Clearance Criteria. 52
Part 24.9 - Owner’s Responsibility. 53
Part 24.10 - Disposal Requirements. 53
Part 24.11 - Work Periods. 53
Part 24.12 - Pre-Construction Submittal List. 54
Part 24.13 - Interim Construction Submittals. 56
Part 24.14 - Post Construction Submittal List. 56

SECTION 25. ASBESTOS RESULTS LIST. 57

SECTION 26. SITE MAP.. 58

ASBESTOS REQUIREMENTS
TABLE OF CONTENTS

SECTION 27. FORMS. 59

SECTION 1. ASBESTOS BIDDING REQUIREMENTS

Part 1.1 - Site Investigations

By submitting a bid for asbestos related work, the asbestos abatement contractor acknowledges that they have investigated and satisfied themselves as to: a) the conditions affecting the work, including but not limited to, physical conditions of the site which may bear upon site access, handling, and storage of tools and materials, access to water, electric, or other utilities, or otherwise affect performance of required activities; b) the character and quality of all surface and subsurface materials or obstacles to be encountered, in so far as, this information is reasonably ascertainable from an inspection of the site, including exploratory work done by the Owner or a designated consultant, as well as, information presented in drawings and specifications included with this contract. Any failure by the asbestos abatement contractor to acquaint themselves with available information will not relieve them from the responsibility for estimating properly the difficulty or cost of successfully performing the work. The Owner is not responsible for any conclusions or interpretations made by the asbestos abatement contractor on the basis of the information made available by the Owner.

Part 1.2 - Insurance Requirements

Successful asbestos abatement contractor shall purchase and maintain insurance that will protect them from claims that may arise out of or result from the activities under this Contract, whether those activities are performed by the asbestos abatement contractor, by any Subcontractor, or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.

Successful asbestos abatement contractor shall submit proof of coverage, as well as, Subcontractors under the Worker's Compensation insurance system of the State of California or other similar benefit acts.

Successful asbestos abatement contractor shall submit a certificate of general liability insurance protecting against liability for bodily injury and property damage arising from asbestos abatement contractor’s activities under this contract.

Such certificate of insurance must contain the following provisions:

(a) The limit of liability shall not be less than $1,000,000.00 per occurrence for bodily injury and property damage liability combined.

(b) The Owner, Owner’s Agents, and Consultant must be named as additional insured, but only in respect to liability arising or resulting from activities under this contract.

(c) In the event of cancellation of the insurance policy, the Owner shall be given thirty days advance written notice.

(d) The insurance certificate must state that the insurance includes liability coverage for asbestos abatement work.

Successful asbestos abatement contractor’s Subcontractors shall submit a certificate of general liability insurance protecting against liability for bodily injury and property damage arising from Contractor's activities under this contract.

Such certificates of insurance must contain the following provisions:

(a) The limit of liability shall not be less than $1,000,000.00 per occurrence for bodily injury and property damage liability combined.

(b) The Owner, Owner's Agents, and Consultant must be named as an additional insured, but only in respect to liability arising or resulting from activities under this contract.

(c) In the event of cancellation of the insurance policy, the Owner shall be given thirty days advance written notice.

Part 1.3 - Licenses and Qualifications Requirements

The asbestos abatement contractor shall be duly licensed in the State of California with the Contractors State License Board (CSLB) in accordance with the provisions of Chapter 9 of Division 3 of the Business and Professions Code, as amended. This includes certification for asbestos-related work, and all other trades or work required under this contract and within these specifications.

The asbestos abatement contractor shall submit a statement, signed by an officer of the company, containing the following information:

1. A record of any citations issued by Federal, State, or Local regulatory agencies within the last 3 years, relating to asbestos abatement activity. Include projects, dates, and resolutions.

2. A list of penalties incurred through non-compliance with asbestos abatement project specifications, including liquidated damages, overruns in scheduled time limitations, and resolutions.

3. Situations in which an asbestos-related contract has been terminated including projects, dates, and reasons for terminations.

4. A list of any asbestos-related legal proceedings/claims in which the Contractor (or employees scheduled to participate in this project) has participated or is currently involved. Include descriptions or role, issue, and resolution to date.

The asbestos abatement contractor is fully and totally responsible at all times for compliance with payment of prevailing wage rates pursuant to provisions of the California Labor Code, for compliance with Division 2, Part 7, Chapter 1, California Labor Code, including but not limited to Section 1776; and for compliance with California Labor Code, Section 1777.5 for all apprentice able occupations.

SECTION 2. ASBESTOS GENERAL REQUIREMENTS - DEFINITIONS

Abatement - Procedures beyond a special operations and maintenance program to control fiber release from asbestos-containing materials. Includes removal, encapsulation, enclosure, repair.

ACGIH - American Conference of Governmental Industrial Hygienists, 6500 Glenway Avenue, Building D-5, Cincinnati, Ohio 45211

AHERA - Asbestos Hazard Emergency Response Act

AIHA - American Industrial Hygiene Association, 475 Wolf Ledges Parkway, Akron, Ohio 44311

Air Filtration Device - See "Pressure Differential Unit"

Airlock - A system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area, typically consisting of two curtained doorways separated by a distance of at least three (3) feet such that one passes through one doorway into the airlock, allowing the doorway sheeting to overlap and close off the opening before proceeding through the second doorway, thereby preventing flow-through contamination.

Air Monitoring - The process of measuring the fiber content of a known volume of air collected during a specific period of time. The procedure normally utilized for asbestos follows the NIOSH Standard Analytical Method for Asbestos in Air P&CAM 239 or Method 7400. For clearance air monitoring, electron microscopy methods may be utilized for lower detection and specific fiber identification.

Air Sampling Professional - The professional contracted or employed by the Owner to supervise and/or conduct air monitoring and analysis schemes. This individual may also function as the Asbestos Project Manager, if qualified. Supervision of air sampling and evaluation of results should be performed by an individual certified in the Comprehensive Practice of Industrial Hygiene (CIH) or having specialized experience in air sampling for asbestos. Other acceptable Air Sampling Professionals include Environmental Engineers, Architects, Chemists and Environmental Scientists or others with equivalent experience in asbestos air monitoring. This individual shall not be affiliated in any way other than through this contract with the contractor performing the abatement work.

Ambient Air - The air outside the buildings and structures or the air as it normally exists in a space prior to abatement.

Amended Water - Water to which a surfactant has been added.

ANSI - American National Standards Institute, 1430 Broadway, New York, New York, 10018

Asbestos - Means the asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite grunerite (amosite), anthophyllite, actinolite, and tremolite.

Asbestos Containing Hazardous Waste - Materials defined by the State of California to be packaged, labeled, transported, and disposed of as an asbestos hazardous waste. This includes all friable asbestos-containing material over one-percent (1%) asbestos. This also includes all asbestos-containing material containing less than one-percent asbestos for which one or more bulk samples have not been point counted and found to contain less than one-percent (1%) asbestos.

Asbestos Containing Material (ACM) - Cal/OSHA - Material composed of asbestos of any type and in an amount greater than one percent (1%) either alone or mixed with fibrous or non-fibrous materials.

Asbestos Containing Construction Material (ACM) - a manufactured construction material containing greater than 0.1% asbestos by weight by the PLM method.

Asbestos Containing Waste - Asbestos-containing material or asbestos-contaminated objects requiring disposal.

Asbestos Project Manager (APM) - (Competent Person) - An individual qualified by virtue of experience and education, designated as the Owner's representative and responsible for overseeing the asbestos abatement project.

ASTM - American Society for Testing and Materials, 916 Race Street, Philadelphia, PA 19103.

Authorized Visitor - The Owner (and any designated representative) and any representative of a regulatory or other agency having jurisdiction over the project.

Bidder - A duly licensed and accredited asbestos contractor who was present at the bid-walk and has submitted a bid.

Cal/OSHA - California Division of Occupational Safety and Health.

Certified Asbestos Consultant (CAC) - A certified asbestos consultant as defined by the Department of Industrial Relations (Cal/OSHA).

Certified Industrial Hygienist (CIH) - An industrial hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene.

Clean Room - An uncontaminated area or room which is a part of the worker decontamination enclosure system with provisions for storage of workers' street clothes and clean protective equipment.

Competent Person - A person who is an accredited EPA Asbestos Contractor/Supervisor and whose accreditation is current.

Containment - Isolation of the work area from the rest of the building to prevent escape of asbestos fibers.

Contract Documents - Written contractual agreements between the Owner and the Contractor that pertain to the work on this project.

Contractor - The individual and/or legal entity and its subcontractors and employees of the contractor and subcontractor awarded the contract.

Contractor/Supervisor - A person who successfully completed an initial U.S. EPA and/or state-approved five-day AHERA accreditation course and who has maintained that training through approved annual refresher training, and possesses current and valid AHERA accreditation documentation as a AHERA accredited Contractor/Supervisor.

Class I, II, III, or IV Work - Work classes described in 8 CCR 1529 that describe different levels of asbestos work.

Critical Barrier - Critical Barriers used to restrict water and air flow. Critical Barriers are the barriers placed over openings in the walls and ceilings of a work area in order to ensure that airborne fibers cannot escape the work area via these openings. The Contractor will construct impermeable barriers at all exits or openings, including doorways, duct chases, mechanical shafts, elevator shafts, floor openings, drains, and the like, so that all possible exit or entrance routes are effectively barricaded and sealed. Unless otherwise specified in the Contract documents, critical barriers shall be constructed of at least one layer of 6-mil thick poly.

Critical Barrier Negative Pressure Test - Required test for negative pressure with only critical barriers and air filtration units installed. This test must be conducted prior to the installation of cleaning barriers, but may be conducted with or without the decontamination unit in place.

Decontamination Enclosure System - (Also known as Decon or Waste Transfer Decon) A series of connected rooms designed for the decontamination of workers and equipment that is separated from the work area and from each other by z-flapped curtained doorways. This unit shall be constructed with at least six-mil poly for the floors, walls, and ceiling. All decontamination enclosure systems used for worker entry and exit shall be equipped with a shower.

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

DOP - Dispersed Oil Particulate which are normally used as an agent for testing the efficiency of HEPA filters.

Dust or Debris - Any visible dust or debris remaining in an abatement area will be considered asbestos-containing residue.

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

EPA - U.S. Environmental Protection Agency

Equipment Room - A contaminated area or room which is part of the worker decontamination enclosure system with provisions for storage of contaminated clothing and equipment.

Exterior of Containment HEPA Filtered Pressure Differential Unit - An air-purifying unit positioned outside, rather than inside the regulated work area. The face, or filter portion of the unit is integrated within the work area, and the remainder of the unit (housing, wheels, rivets, control panel, etc.) is located outside of the work area. This allows filters on the air intake to be changed from within the regulated area but access to the machine itself is available to those outside the area. Pressure differential units which pass DOP testing across the HEPA filter, but fail at rivets, control panels, wheels, etc. may be used in this fashion as long as the failure point of the unit can remain on the exterior of containment while the face of the unit and filters are inside containment.

Facility - Any institutional, commercial or industrial structure, installation, or building.

Facility component - Any pipe, duct, boiler, tank, reactor, turbine, or furnace at or in a facility or any structural member or a facility.

Fed OSHA or OSHA - Federal Occupational Safety and Health Administration.

Fixed object - A piece of equipment or furniture in the work area which cannot be removed from the work area.

Friable asbestos - Asbestos-containing material which can be crumbled to dust when dry, under hand pressure or by mechanical means.

Glove Bag Technique - A method with limited applications for removing small amounts of friable asbestos-containing materials from ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces. The glove bag is constructed of 6 mil transparent polyethylene with two inward projecting long sleeves, an internal tool pouch, and an attached, labeled receptacle for asbestos waste.

HVAC - Heating, ventilation and air conditioning system.

HEPA Filter - A high efficiency particulate air filter capable of removing particles 0.3 microns in diameter from an air stream with 99.97% efficiency.

HEPA Vacuum - A vacuum system equipped with HEPA filtration.

Lock-down - To mist the air and to wet surfaces with an agent designed to bind asbestos fibers together.

Magnehelic gauge - Instrument for measuring the static air-pressure differential across a barrier.

Manometer - See "Magnehelic gauge".

Mini-Enclosure - Mini-enclosures shall be constructed of 6 mil polyethylene (attached with tape and/or glue to walls and floors) and shall be small enough for 1-2 workers who can enter the enclosure, complete the abatement exercise, pass out the containerized debris and exit.

Monitoring - May include:

a) Visual inspection for the presence of visible emissions; or
b) Air monitoring performed in accordance with accepted methods;
c) Core samples of encapsulated or bridged materials.
d) Bulk sampling of soil during and following abatement.
e) Sampling substrata following abatement.

Movable Object - An unattached piece of equipment or furniture in the work area which can be removed from the work area.

NVLAP - National Voluntary Laboratory Accreditation Program.

NESHAP - The National Emissions Standards for Hazardous Air Pollutants (40 CFR Part 61, Nov. 20, 1990)

NIOSH - The National Institute for Occupational Safety and Health CDC-NIOSH, Building J N.E. Room 3007, Atlanta, GA 30033

Outside Air - The air outside buildings and structures.

Owner - The Owner or Owners authorized Representative.

PCM - Phase contrast microscopy according to NIOSH Method 7400.

Plasticize - See "Poly".

Poly - Polyethylene sheeting. Used to cover floors, walls, ceilings, create critical barriers, and seal open vents on mechanical systems, etc. Note: All poly must be flame-retardant.

Pressure Differential Unit (PDU) - Also called negative air units. A portable exhaust system equipped with HEPA filtration and capable of exhausting air out the asbestos work area to create a negative pressure work

environment..

Regulated Area - means an area established by a Contractor to demarcate areas where airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed, the permissible exposure limit. Additionally "Regulated Area" means any measure used to restrict access to an area where personnel impacting asbestos-containing materials are required to wear respiratory protection and/or protective clothing by the project specifications regardless of airborne asbestos concentration levels.

Regulations - shall include but not be limited to:

a. U.S. Environmental Protection Agency Regulations for Asbestos (Title 40, Code of Federal Regulations, Part 61, Subparts A & B)

b. U.S. Environmental Protection Agency, Office of Toxic Substances, Asbestos-Containing Materials in School Buildings, A Guidance Document, Parts 1 & 2.

c. Title 8, Chapter 4, Subchapters 1 through 21, California Administrative Code, General Industry Safety orders, Section 5208 "Asbestos" or the applicable sections of the Federal Asbestos Regulations. Cal/OSHA Construction Safety Orders, Section 1529.

d. "Asbestos Hazard Emergency Response Act", U. S. Environmental Protection Agency, 40 CFR, Part 763. Final Rule and Notice.

e. Applicable local county Air Pollution Control Owners and Air Quality Management Districts.

Removal - The stripping of any asbestos-containing materials from surface or components of a facility.

Renovation - Altering in any way one or more facility components. Operations in which load-supporting structural members are wrecked or taken out are excluded.

Shower Room - A room between the clean room and the equipment room in the decontamination enclosure with hot and cold or warm running water controllable at the tap and suitably arranged for complete showering during decontamination. The shower room must be equipped with an overflow pan to contain water splashed, leaked or spilled out of the shower unit.

Staging Area - Either the holding area or some area near the waste transfer airlock where containerized asbestos waste has been placed prior to removal from the work area.

Structural Member - Any load-supporting member of a facility, such as beams and load-supporting walls or any non-load-supporting member, such as ceilings and non-load supporting walls.

Submittals - Pre, interim, and post job documents submitted by the contractor to Owner/Owner's Representative as indicated in General Requirements and Bidding Requirements.

Surfactant - A chemical agent added to water to improve wetting and penetration into asbestos materials.

TEM - Transmission Electron Microscopy according to AHERA specifications for Level II analysis.

Visible emissions - Any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

Waste Load-out/Transfer System - A decontamination system utilized for transferring containerized waste from inside to outside of the work area. A series of three connected rooms used for the load-out of asbestos-

containing materials that have been properly containerized. The waste load out chamber system shall normally consist of three connected chambers adjacent to the work area. Each chamber shall be constructed with six-mil thick poly for the floors, walls, and ceiling

Wet Cleaning - The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other utensils which have been dampened with water and afterwards thoroughly decontaminated or disposed of as asbestos contaminated waste.

Work Area - Designated rooms, spaces, or areas of the project in which asbestos abatement actions are to be undertaken or which may become contaminated as a result of such abatement actions. A contained work area is a work area which has been sealed, plasticized, and equipped with a decontamination enclosure system. A non-contained work area is an isolated or controlled-access work area which has not been plasticized nor equipped with a decontamination enclosure system.

Worker - Contractor employee who has completed course work and passed the exam for an EPA accredited, AHERA asbestos abatement worker. Certificate must be current.

SECTION 3. NOTIFICATIONS, SUBMISSIONS, POSTINGS

Part 3.1 - Notification

Prior to commencement of work the Contractor shall send notices of work to be completed to the agencies listed below with a copy of each to be provided to the Owner or its representative at the pre-construction meeting.

For compliance with 40 CFR part 61.146 of Subpart M, send notice at least 10 working days prior to start of work to the following appropriate agencies if trigger quantities of RACM are met or for a demolition:

Sacramento Metropolitan AQMD
777 12th Street, Third Floor
Sacramento, CA 95814-1908

Phone: (916) 874-4800
Fax: (916) 874-4899

U.S. EPA - Region IX
Asbestos NESHAP Notification (Air 5)
75 Hawthorne Street
San Francisco, California 94105
Tel (415) 947-4182

For compliance with Title 8, California Administrative Code, Construction Safety Order 1529, Asbestos Regulations send written notice at least one day prior to start of work to:

State of California
Department of Occupational Safety and Health (Cal/OSHA)

These notices shall include, at a minimum, the name and address of the Contractor, the name and address of the work site, the type of work to be done including the percent asbestos content of the material, the methods used to prevent migration of the fibers, personal protective measures, the number of his workers involved, any union representation of the workers and the methods of disposal including the names and EPA numbers of both the certified hauler and the waste disposal site. The notices shall also include start and finish dates. Changes in start and completion dates shall be reported immediately to the proper agency. Use forms provided by agency whenever possible.

Part 3.2 - Pre-Construction Submittals

Submit copies of documents required to be included in the Bidding Requirements. At a minimum these documents will include:

1. Copy of State of California Contractor License Issued by CSLB
2. Copy of State of California CSLB Active License
3. Copy of State of California CSLB Asbestos Certification
4. Copy of Department of Industrial Relations; Division of Occupational Safety and Health; Certificate of Registration for Asbestos-related Work
5. Copy of signed statement from company officer listing citations and pending proceedings against the Contractor, or if there have been no citations, a copy of the statement that no actions by regulatory agencies have occurred in the last three years signed by an officer of the company.

Submit copies of insurance certificates which meet requirements as outlined in Section 1, Part 1.2, of this Specification.

Submit copies of notifications to government agencies.

Submit proof satisfactory to the Owner that required permits have been acquired applicable to the project being performed and specific to the project site and location. If no city, county, or other permits for parking, waste container location, or variances for scheduled work hours are required this should be stated in writing and submitted to the Owner.

Submit Sub-contractors information or statement that Sub-contractors will not be required or used during this project. This statement should also include that if it becomes necessary to use a Sub-contractor during this project that Sub-contractor will not be allowed to perform work until all required documentation has been submitted for review by the Owner or Owner's CAC, and the Contractor receives written approval for use of the Sub-contractor on this project.

Submit a complete list of all rented equipment, or equipment expected to be rented from an outside contractor for use in "Regulated Areas", "Work Areas", or "Containments", where the equipment may be exposed to elevated levels of airborne asbestos. If no equipment is to be rented a statement should be submitted stating no equipment will be used on the project. The statement should also include that if it becomes necessary to use rented equipment that written statements from each rental company will be provided to the Owner prior to its use, indicating the rental companies acknowledgment that the equipment is provided for and may be used in areas where airborne levels of asbestos may be present.

Submit non-emergency telephone numbers, other then 911, for the appropriate Police, Sheriff, and Fire Departments. This list of numbers shall also include the Name, pager or cell phone numbers of the on-site supervisor and his immediate company supervisor.

Submit detailed written directions from the project site to the medical facility to be used in case of an emergency. Also include a map which sufficiently shows the route to be taken from the site to the designated medical facility.

Submit written emergency procedures pertinent to the work to be performed and which can be implemented by site personnel if the need arises.

Submit detailed information on preparation of work area, personal protective equipment, employee experience, training and assigned responsibilities during the project. Also list decontamination procedures for personnel, work area and equipment, abatement methods and procedures, required air monitoring program, procedures for handling and disposing of waste materials and procedures for final decontamination and cleanup.

Submit a detailed work schedule. The schedule shall have, as a minimum, the work area and the day/month for beginning and terminating work in each work area. During progress of work, it shall be the Contractor's responsibility to keep the schedule current and up to date.

Submit documentation satisfactory to the Owner that the Contractor's employees, including foremen, supervisor, and any other company personnel or agents who may be exposed to airborne asbestos fibers or who may be responsible for any aspects of abatement activities, have received required US EPA AHERA training.

Submit documentation from physician that all employees or agents who may be exposed to airborne asbestos in excess of background levels have been provided with an opportunity to be medically monitored to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. In addition, document that personnel have received medical monitoring as required by Cal/OSHA regulations. The Contractor must be aware of and provide information to the examining physician about unusual conditions in the workplace environment (e.g., high temperatures, humidity, chemical contaminants) that may impact on the employee's ability to perform work activities.

Submit documentation of respirator fit-testing for all Contractor employees and agents who must enter any work area where asbestos-containing materials may or will be impacted. This fit-testing shall be in accordance with qualitative procedures as required by OSHA regulations or be quantitative in nature. Documentation pertaining to NIOSH approvals for all respiratory protective devices utilized on site shall also be included.

Submit copy of waste transporters Department of Toxic Substances Control, Hazardous Waste Transporter Registration if hazardous asbestos-containing waste is to be removed during the project. If hazardous asbestos-containing waste will not be generated submit the name, address, and registration information for the waste hauler to be used for transporting the waste.

Submit documentation listing the name and site address of the waste facility designated to receive asbestos-containing waste generated during this project. This documentation shall also include the EPA Identification number, and a copy of the current permit authorizing the waste facility to accept and dispose of asbestos-containing waste.

Submit Safety data sheets (SDS) for any and all applicable, materials, supplies, etc. These documents must be legible and completely reveal information required to be communicated to the Contractor’s employees, visitors, and Owner Representatives.

Submit manufacturers' certifications that high efficiency particulate air (HEPA) vacuums, pressure differential units and other local exhaust ventilation equipment conform to ANSI Z9.2-79.

Submit name of laboratory/person to be used for Phase Contrast Microscopy (PCM) analysis and copy of current NVLAP Certificate of Accreditation (if applicable), and most recent NIOSH Proficiency Analytical Testing Program results.

Submit a written statement that OSHA monitoring will be performed for all asbestos-related activities performed during this project. This statement must be on company letterhead, dated, include name of the site or project being worked on, and signed by an authorized agent of the company performing the asbestos-related work.

Submit manufactures documentation pertaining to the capability of waste water filters to filter particles of 1.0 micron in size.

Part 3.3 - Submittals During the Work Process

Submit weekly - copies of work site entry/exit logs as well as information on worker and visitor access.

Submit weekly - copies of results of air sampling data collected during the course of the abatement including OSHA compliance air monitoring results.

Submit weekly - copies of air-differential manometer graphs and HEPA filter change logs. (see Section 13)

Submit weekly - copies of all transport manifests, trip tickets, weights and disposal receipts as applicable for all asbestos waste materials removed from the site during the abatement process.

Submit as applicable - copies of current insurance certificates, notifications, worker documentation, etc. if these items expire during the course of the project.

During abatement the Owner will upon request submit to the Contractor results of bulk material analyses and air sampling data collected during the course of the abatement. These serve only to monitor Contractor performance during the project.

Submit upon request during or after completion of the project, documentation deemed by the Owner to be pertinent to the project.

Part 3.4 - On-Site/Clean-Room Area Postings and Documentation

The following items shall be posted at the entrance to “Regulated Areas”, “Work Areas”, and “Containments”, or in the possession of the Contractor’s on-site supervisor where respiratory protection or protective clothing is required by this Specification.

A Cal/OSHA Information poster and a Cal/OSHA Construction Site poster.

A copy of the CAL-OSHA and the local AQMD/APCD or EPA NESHAP Notification (if applicable).

Non-emergency telephone numbers, other then 911, for the appropriate Police, Sheriff, and Fire Departments. This list of numbers shall also include the Name, pager or cell phone numbers of the on-site supervisor and his immediate company supervisor. Detailed written directions from the project site to the medical facility to be used in case of an emergency. Also a map which sufficiently shows the route to be taken from the site to the designated medical facility.

Written emergency procedures pertinent to the work to be performed and which can be implemented by site personnel if the need arises.

Written entry/exit procedures shall be posted in the clean room and equipment room. (See Section 12)

List of persons authorized to be in restricted area. The list shall include, among others, the following names with addresses and phone numbers:

Contractor	Air-sampling Professional	Asbestos Project Manager
Testing Laboratory	Owner's representatives	Any other designated by the Owner

Entry/exit log for work performed in all “Regulated Areas”, “Work Areas”, and “Containments” where respiratory protection or protective clothing is required by this Specification. Contractor shall maintain copies of all entry/exit logs on the site during the performance of asbestos-related work.

All of the Contractor's personnel and area air sampling results shall be posted in the clean room area or in the possession of the Contractor’s site supervisor if no decontamination unit is required for the work being performed within 72 hours of collection, and submitted to Owner’s CAC weekly unless otherwise noted.

Copies of Safety data sheets (SDS) for all materials on-site.

Part 3.5 - Job Site Documents

The following shall be in the possession of the Contractor’s supervisor at each job site:

1. All contract specifications to include, change orders, etc. Contractor competent person must sign a document stating he has full knowledge of all Sections included in this specification.
2. Written Injury and Illness Prevention Program.
3. Written Respiratory Protection Program
4. An updated list of all contractor employees who have worked on this job.
5. List of all US EPA AHERA competent employees (supervisors).
6. Training records
7. Medical records
8. Respiratory fit test records

Part 3.6 - Project Close-out Documents

Contractor shall submit post-construction submittals to Owner/Owner’s Representative within thirty (30) days of the completion of asbestos-related work. This documentation shall include at a minimum any and all applicable documents as outlined in Part 3.2 and Part 3.3 of this Section. In addition the Contractor should consult and submit as applicable documents identified in Section 24, Part 24.3 - Post Construction Submittal List

SECTION 4. SITE SECURITY

The work area is to be restricted to authorized, trained and protected personnel. A list of authorized personnel shall be established prior to job start and posted in the clean room of the work decontamination facility, or in the possession of the on-site supervisor for the Contractor.

Contractor shall report to the Owner immediately entry into the work area by unauthorized individuals.

A log book shall be maintained during the project. Anyone who enters the work areas must record name, affiliation, time in, and time out for each entry.

Access to all “Regulated Areas”, “Work Areas”, and “Containments” shall be through a designated entry point. All other means of access (doors, windows, hallways, etc.) shall be blocked or locked so as to prevent entry to or exit from these areas. The only exceptions for this rule are the waste pass out air-lock, and emergency exits in case of fire or accident.

Emergency exits shall NOT be locked, however, they shall be sealed with polyethylene sheeting and tape until needed. All emergency exits shall be clearly designated. They shall also have a razor knife permanently in place to facilitate emergency exit.

Contractor should have control of site security during abatement operations whenever possible, in order to protect work efforts and equipment. During off-hours access to the abatement area shall be restricted by a lockable entry.

Contractor will have Owner's assistance in the enforcement of restricted access by Owner's employees.

Storage of debris will be such that access to it is limited to the Contractor. Lockable bins shall be utilized and they shall be locked at all times except when loading occurs. No soft covers will be allowed for any storage containers. When a container with rolling tops is being used all access points to the interior of the container must be secured by the Contractor with locks of sufficient strength to require special effort to gain access to the interior of the waste container.

SECTION 5. EMERGENCY PLANNING

Emergency planning and procedures shall be developed by the Contractor and shall include considerations of fire, explosion, toxic atmospheres, electrical hazards, slips, trips and falls, and heat related injury and agreed to by Contractor and Owner prior to abatement initiation. These emergency procedures shall be established and presented to all employees and the Owner prior to the beginning of any work. A written emergency plan shall be posted or in the possession of the on-site supervisor for the Contractor regardless of the work being performed.

A copy of the Contractor’s written Injury and Illness Prevention Program shall be posted or in the possession of the on-site supervisor for the Contractor regardless of the work being performed.

Employees shall be trained in evacuation procedures in the event of workplace emergencies. Telephone numbers of all emergency response personnel shall either be in the possession of the on-site supervisor, or be prominently posted in the clean change area and equipment room, along with the locations of the nearest telephone indicated on a map or diagram.

At least two fire extinguishers shall be present on site and in close proximity to the work being performed regardless of the type of work being conducted. At least one fire extinguisher shall be present outside of any containment. Additional extinguishers shall be distributed according to Cal/OSHA requirements or as identified in this Specification.

When open abatement is being performed, an emergency blast horn (canned air horn) shall be placed inside of containment for emergency evacuation in the event of a fire or other emergency.

If noted in any other section of this Specification, a means of communication shall be established between inside and outside of containment whenever a decontamination setup is required, particularly for all open abatement projects. This requirement may be met through walkie talkies or cell phones.

During hot working conditions, such as in an attic space during summer, or in containments where live steam or hot water lines are exposed, special attention must be given to the possibility of heat stress and burns. The Owner's site representative may make recommendations for work breaks for employees, but the supervisor is ultimately responsible for his workers.

SECTION 6. PRE-CONSTRUCTION MEETING

A pre-construction meeting will be held at a time and location to be determined by the Owner. The successful Bidder, his on-site supervisory personnel, and Air Sampling Professional (if applicable), representatives of the Owner, Owner's Representative, and other individuals as necessary shall be present at this meeting.

At this meeting the Contractor shall provide all required submittals, as indicated above in Section 3, Part 3.2. The Contractor should use the Pre-Construction Submittal List provided in Section 24, Part 24.1 to assure all required submittals are included in his submittal package.

SECTION 7. MATERIALS AND EQUIPMENT

Part 7.1 - Contractor Equipment and Supplies

Deliver all consumable materials in the original packages, containers or bundles bearing the name of the manufacturer and brand name (where applicable). These must be approved by the Owner. Polyethylene (Poly) sheeting, of appropriate thicknesses for walls, floors, and ceilings, (4 mil's thick for walls, 10 mil's thick for lining of waste containers, 6 mil's thick for floors and all other uses), shall be provided in widths selected to minimize the frequency of joints.

All poly shall be flame-retardant (fire-rated) regardless of its designated use inside or outside any building.

Poly sheeting utilized for worker decontamination enclosure shall be opaque white or black in color and each layer shall be a minimum of 6 mil thick. Modesty barriers are to be erected whenever and wherever the Owner's CAC determines one is needed.

Disposal bags shall be constructed of 6 mil poly with labels required by OSHA, CDPH, Toxic Substance Control regulations. Disposal drums shall be metal or fiber board with locking ring tops to be used only if required and/or allowed by selected waste facility.

Stick-on labels as per DTSC, DOT and OSHA requirements for disposal drums shall be provided.

Warning signs as required by OSHA shall be provided and posted per regulations.

Surfactant (wetting agent) shall be a 50/50 mixture of polyoxyethylene ether and polyoxyethylene ester, or equivalent, mixed in a proportion of one (1) fluid ounce to five (5) gallons of water or as specified by manufacturer. If amphibole asbestos in present in the materials being removed, the Contractor shall use a surfactant that is designed to wet the materials. This information shall be submitted to the Owner's CAC before the start of the project.

A sufficient quantity of pressure differential units equipped with HEPA filtration and operated in accordance with ANSI Z9.2-79 and EPA guidance document EPA 560/5-83-002 Guidance for Controlling Friable Asbestos-Containing Materials in Buildings, Appendix F: Recommended Specifications and Operating Procedures for the Use of Negative Pressure Systems for Asbestos Abatement, shall be utilized so as to meet the requirements of Section 12.

An adequate number of respirators for the work force shall be on hand. These respirators will include, when specified:

a. Type "C" air-supplied respirators in positive pressure or pressure demand mode with full face pieces and HEPA-filtered disconnects.

b. Full-face powered-air respirators with HEPA-filters.

c. Half-face or full face respirators with HEPA filters.

All respirators shall be NIOSH-approved and be equipped with supplies for immediate replacement of defective parts.

Full body disposable protective clothing, including head, body, and foot coverings consisting of material impenetrable by asbestos fibers shall be provided to all workers and authorized visitors in sizes adequate to accommodate movement without tearing.

Additional safety equipment such as hard hats, eye protection, safety shoes, disposable PVC gloves, etc., as necessary shall be provided to all workers and authorized visitors.

Non-skid footwear shall be provided to all abatement workers.

If launderable clothing is to be worn underneath disposable protective clothing, it shall be provided by the Contractor to all abatement workers. Laundering must occur in accordance with applicable OSHA requirements.

A sufficient supply of scaffolds, ladders, lifts and hand tools (e.g., scrapers, wire cutters, brushes, utility knives, wire saws, etc.) shall be provided as needed.

Rubber dustpans and rubber squeegees shall be provided for cleanup.

A sufficient supply of HEPA-filtered vacuums and HEPA filtered negative air units shall be provided to meet the specifications.

All HEPA equipment to be used on the project must be delivered to the site empty of all debris, clean, free of dust, and in full operating condition. All HEPA equipment to be used shall be DOP tested onsite by a third party at the start of the project before being used on the project. This DOP certification must be verified by Owner's CAC prior to its use.

DOP certification testing shall be observed and witnessed by an Owner's CAC. Copies of DOP test results and certification must be submitted to Owner's CAC within 24 hours of the testing being performed.

No product or material will be used on the project unless the product data sheets and all SDS's have been submitted, reviewed, and approved by the Owner for use. Any product or material found on the project which has a product data sheet and/or SDS available and has not been approved will be removed from the site by the Contractor until review and approval has been completed by the Owner.

Part 7.2 - Rental Equipment and Supplies

Any equipment rented and delivered to the site for the purpose of conducts asbestos abatement work must be accompanied with documentation verifying that the rental agency has been notified, and acknowledges receipt of notification that the equipment being rented will be used for asbestos abatement work. This documentation must be submitted to the Owner's CAC prior to the equipment being delivered to the job site.

Rental equipment, including scaffolding, will be held to the same standard of cleanliness as all other equipment on this project.

All rented equipment must be inspected and accepted by Owner's CAC as it arrives onsite. Any equipment covered with dust (no matter the source of dust), plaster debris, multiple layers of encapsulant and/or spray glue, or any other debris will not be accepted. Delays caused by a lack of clean equipment will not extend Contractor's schedule. Equipment rejected due to a lack of cleanliness must be removed from Owner's grounds in order to be cleaned. Dirty equipment wrapped in plastic will not be acceptable.

The Owners' agent/site representative must be informed 24 hours prior to the delivery of any rental equipment.

The decision of the Owner or its representative on all rental equipment and supplies shall be final.

SECTION 8. WORK SITE FACILITIES

The Owner shall provide sanitary facilities for abatement personnel outside of the enclosed work area. To use these facilities all workers shall wear street clothes, not bathing suits or disposable coverall while using the facilities.

The Owner shall provide water for construction purposes. Contractor shall connect to existing Owner system.

The Owner shall provide the electrical source.

The Owner or its representative shall specify the waste water discharge location and location of waste containers.

The Owner shall specify on-site parking areas, if available, and access to the site.

SECTION 9. RESPIRATORY PROTECTION

All respiratory protection shall be provided to workers in accordance with the submitted written respiratory protection program, which includes all items as required by OSHA. This program shall be posted in the clean room of the worker decontamination enclosure system or adjacent to the clean room.

The Contractor shall ensure that all workers entering the regulated area wear appropriate respiratory protection. Respiratory protection provided workers shall be in accordance with 8 CCR 1529, and 8 CCR 5144 and the respiratory protection program submitted by the Contractor. This program shall be available at the project site.

The Owner or their representative may deny access to a regulated area to anyone who, in the final judgement of the Owner or their representative, is not properly wearing adequate respiratory protection for the project conditions. This includes but is not limited to those wearing unidentified respirators, those with improperly sealed respirators, those wearing respirators in an improper manner such as over their protective suit hood, or in any other fashion judged by the Owner or their representative to be improper or inadequate to protect the individual from the airborne asbestos at the project site.

The Contractor shall provide each worker needing respiratory protection with his or her own, individually identified, NIOSH-approved respirator. At a minimum, these respirators will be equipped with a P-100 series HEPA filter. The Contractor shall provide additional filter types if that becomes necessary for specific hazards discovered on the job site or if required in the contract documents.

The Contractor shall ensure that all workers use the respirator in compliance with the manufacturer's instructions for proper use and care of that product.

Workers must perform positive and negative respirator seal checks each time a respirator is put on, provided the respirator design so permits.

The Contractor shall ensure that those workers wearing powered air purifying respirators test the air flow rate according to the frequency and methods specified by the manufacturer.

Workers shall be given, at least, a qualitative fit test in accordance with procedures detailed in the Cal/OSHA requirements for all respirators to be used on this abatement project. An appropriately administered quantitative fit test may be substituted for the qualitative fit test.

The Contractor shall ensure and provide written records to the Owner's CAC that all workers wearing tight-fitting respirators have been appropriately fit tested in accordance with the requirements of 8 CCR 5144.

The Contractor shall ensure that nothing interferes with the seal of the respirator to the face of the worker. This includes but is not limited to facial hair, clothing, protective clothing, equipment or anything else that comes between the respirator and the face of the worker.

Use of any respirator must be in compliance with the manufacturer's instructions for proper use and care of that product.

The Contractor shall ensure that workers wear respirators underneath protective clothing.

Workers conducts any work that may create an airborne release of asbestos must wear appropriate respiratory protection. This includes, but is not limited to the pre-cleaning of asbestos contamination off of furniture, equipment and floors, and the set-up of contaminated work areas.

The judgement of the Owner's CAC shall be final if there is a disagreement between the Owner and the Contractor regarding the need for wearing or the type of personal protection required..

In no event will a negative exposure assessment be allowed to lower respiratory protection, from that listed in the Scope of Work or required by regulation in the absence of an NEA, prior to the start of a project. Air samples used for negative exposure assessments created after the project has started must be from work conducted under this contract.

<u>Minimum Respiratory Protection for OSHA Class I Work</u>
All Class I asbestos work will require tight-fitting, full-face powered-air purifying respirators pursuant to Title 8 1529.

Unless stated otherwise in the contract documents, for the purposes of respiratory protection, Class I work will include the removal of materials such as gypsum board surfaces that are covered with a texturing or skim coat material that contains >1% asbestos.

<u>Minimum Respiratory Protection for Class II and III Work Practices</u>
Unless specified differently in the contract documents, the Contractor's employees conducts Class II or III work will wear a minimum of half-face air-purifying respirators. Contract documents may require additional respiratory protection, such as the use of full face air-purifying respirators or powered air purifying respirators.

<u>After work has begun</u>, if a Contractor wishes to lower respiratory protection requirements, he or she must demonstrate to the Owner's CAC that personal air sampling results from that project prove that airborne fibers levels are below the limit of quantification for the phase contrast microscopy method. The Owner's CAC will

normally require sampling results used for this purpose to include several days of sampling taken during the work expected to generate the highest expected airborne levels. The Owner's CAC will have final authority regarding whether or not the respiratory protection may be reduced or eliminated. For example, the Owner's CAC may require personal samples be analyzed by TEM before determining that asbestos does not pose an airborne health risk.

All Class I work shall require full-face powered air purifying respirators and are not subject to a reduced level of respiratory protection regardless of the air sample results.

The Owner's CAC has full authority to raise the level of respiratory protection required for access to the regulated area if in his or her judgement additional respiratory protection is required. For example, if personal air sample results collected by either the Contractor or Owner's CAC indicate higher than expected levels, the Owner's CAC is authorized to increase the level of required respiratory protection. The Owner's CAC will determine if the increased respiratory protection is due to new, unexpected developments such as the discovery of new materials, or if the increase is due to the Contractor failing to follow good work practices. The judgement on this matter by the Owner's CAC will be final.

The Owner is not responsible for increased costs or delays resulting from the need to increase respiratory protection should the reason for the increased respiratory protection be due to the Contractor's failure to adequately utilize good engineering controls and work practices and/or the prompt cleanup of debris.

The Contractor may only implement respiratory protection changes after receiving written approval for the change from the Owner's CAC.

Powered-air purifying respirators must be worn if waste containers spill, break, or in any other fashion require a Class I work cleanup be performed.

The Contractor shall comply with the respiratory protection requirements in 8 CCR 5144 includes assigned protection factors for all respirators. The following list of respirators and their assigned "protection factors" shall be the criteria for the selection of respiratory protection.

Respirator Selection	Protection Factor
Half-face or full-face air purifying respirator equipped with HEPA filter.	10
Full-face air purifying respirator equipped with HEPA filter with quantitative fit test.	50
Full-face Type C continuous flow supplied air.	1000
Full-face, powered air purifying respirator equipped with HEPA filter.	1000
Full-face supplied air respirator operated in pressure demand mode.	1000
Full-face supplied air respirator operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus.	1000

Workers shall be provided respirators equipped with HEPA filters approved by NIOSH to be worn in the designated work area and/or whenever a potential exposure to asbestos exists. Owner or its representative may refuse entry to the work area to a worker with inappropriate respiratory protection.

Sufficient filters shall be provided for replacement as required by the workers or applicable regulations. Disposable respirators shall not be used.

Whenever type C respirator protection is used, compressed air systems shall be designed to provide air volumes and pressures to accommodate respirator manufacturer specifications. The compressed air system shall have a reservoir of adequate capacity to allow the escape of all respirator wearers from contaminated areas in the event of compressor failure.

Compressors must meet the requirements of 29 CFR 1910.134(d). Location of compressors must be approved by Owner for exhaust and noise considerations. Location of compressors must be approved by Owner for exhaust and noise considerations.

Compressors must have an in-line carbon monoxide monitor and periodic inspection of carbon monoxide monitors must be documented. Documentation of adequacy of compressed air systems/respiratory protection systems must be retained on site. This documentation will include a list of compatible components with the maximum number and type of respirators that may be used with the system. Periodic testing of compressed air shall insure that systems provide air of sufficient quality (Grade D breathing air). Documentation of this testing, including a description of the process used to perform the test and results of each test must be submitted to the Owner's CAC weekly.

Whenever powered air-purifying respirators are required, a sufficient supply of replacement batteries and HEPA filter cartridges shall be provided to the workers. Spare fully charged batteries must be available on-site for replacement. The flow rate delivered to the face piece shall be checked and recorded by the Contractor on the sheet provided by the Owner's CAC each time a worker dons the respirator. Written respiratory protection program must detail how this testing is to be performed by each employee or the onsite supervisor. The Contractor shall ensure that the flow rate for PAPRs meets the requirements listed in 8 CCR 1544 regarding tight and loose fitting respirators as appropriate. The Contractors shall also ensure that PAPRs are worn, checked and maintained according to the directions of the manufacturer.

During encapsulation operations or usage of other organic base aerosols (e.g. spray glue, expanding foam,

etc.) workers shall be provided with combination organic vapor/HEPA filter respirator cartridges.

SECTION 10. PERSONNEL PROTECTION REQUIREMENT AND TRAINING

Prior to commencement of abatement activities all personnel who will be required to enter the work area or handle containerized asbestos containing materials must have received adequate training in accordance with the OSHA, EPA AHERA, EPA NESHAP and DTSC regulations.

All personnel performing asbestos related work shall possess a current accreditation certificate as an asbestos worker or contractor/supervisor as described in 40 CFR Part 763, Appendix C to subpart E, Asbestos Model Accreditation Plan.

Special on-site training on equipment and procedures unique to this job site shall be performed by the Contractor as required or recommended by the equipment manufacturer.

The Contractor shall provide training in emergency response and evacuation procedures.

Disposable clothing, including head, foot and full body protection, shall be provided in sufficient quantities and adequate sizes for all workers and authorized visitors. Damaged coveralls shall be immediately repaired or replaced.

Hard hats, protective eye-wear, safety shoes, proper protective gloves, rubber boots and/or other footwear shall be provided by the Contractor as required for workers and authorized visitors.

Contractor personnel shall not wear street clothes or clothes of any type underneath the protective disposable clothing during any Class I work where showering is required. Upon exiting the work area, no items worn in the work area, such as clothing, personal protective gear, footwear, or hair coverings will be allowed to be worn past the shower of the decontamination unit. Contractor workers have the option of wearing disposable undergarments or a bathing suit underneath protective disposable clothing.

Each time the worker(s) enter the work area they will don new disposable clothing. Street clothes, including but not limited to, underwear and street shoes shall not be allowed inside the work area, except during visual clearance activities.

The Owner’s CAC may use personal judgement to allow authorized personal to wear street clothes under protective clothing during the construction of final visual or other short-duration visits into the regulated area during times which asbestos is not being disturbed and gross debris is not present.

SECTION 11. WORKER DECONTAMINATION ENCLOSURE SYSTEMS

Worker decontamination enclosure systems shall be provided at all locations where workers will enter or exit the work area. Enclosure systems may be constructed out of metal, wood or plastic support as appropriate. Plans for construction, including materials and layout, shall be submitted as shop drawings and approved, in writing, by the Owner or its representative prior to work initiation. Detailed descriptions of portable, prefabricated units, if used, must be submitted for the Owner's approval. The worker decontamination enclosure system shall consist of at least a clean room, a shower room, and an equipment room and shall be constructed with at least 6 mil fire rated plastic sheeting.

All decontamination units and pressure differential units located outside the building shall be enclosed with a 2"x 4" wood studs and ½" plywood enclosure for security. Pressure differential units shall be secured as necessary to the building or ground. Exhaust openings shall have metal grates to prevent objects from being

put into the exhaust openings. Pressure differential exhaust shall be exhausted to an area acceptable to the Owner or Owner's CAC.

Entry and exit from the worker decontamination enclosure system shall be through doorways designed to restrict air movement between chambers when not in use by either means of overlapping plastic or by means of zippers. In all hospital settings, only zippered doors are acceptable between all decontamination chambers or anterooms. The dirty side shall have an extra layer of 6 mil poly sheeting on the floor as a "boat layer" and it shall be replaced at least daily.

The clean room shall designed and sized and equipped to adequately accommodate the size of the work crew for their change of clothes, cleaning supplies and respiratory protection equipment. Lighting, heat and electricity shall be provided as necessary for comfort. The clean room space shall not be used for storage of tools, equipment or materials or as office space.

A shower is required on any project that involves removal of greater than 25 linear feet of asbestos containing TSI or greater than 10 square feet of asbestos containing surfacing material. In addition, if the scope of works dictates a shower these provisions shall also apply. The shower room shall contain one or more showers as necessary to adequately accommodate workers. The shower enclosure shall be constructed to ensure against leakage of any kind. In addition, the shower shall be a separate unit from the decontamination unit walls. The shower unit cannot be made from poly. Metal or hard plastic is acceptable. An adequate supply of soap, shampoo and towels shall be supplied by the Contractor and available at all times for use by employees. Shower water shall be drained, collected and filtered through a system with at least 5.0 micron particle size collection capability.

The shower pan in the shower chamber shall be, at least, 3' x 3' in size. The shower chamber shall be constructed so that no water from the shower can spray out of the chamber, nor any water run down the sides of the poly and miss the pan. The shower chamber dimensions shall be determined by the size of the shower pan but are not to be smaller than 3' wide by 3' long by 6' tall.

Multiple showers are required if the number of asbestos workers exceeds ten per Title 8 3366 Washing Facilities. When there are less than five employees, the same shower may be used by both sexes if the shower room can be locked from the inside. A minimum of two showers will be required for more than 10 workers.

Each decontamination chamber shall have, at least, a 4" lip of poly from the floor up the wall to prevent possible transfer of water and debris between chambers. Excess poly at the corners of this floor is to be fitted to the sides of the chamber by folding poly and taping, as opposed to cutting away excess poly and taping seams. In addition to this 4" lip of poly, the shower chamber shall have an overflow pan, in which the shower unit sits inside, that is capable of holding sufficient water in the event of an overflow. The filter system and any hose connections transferring contaminated water shall be located in a secondary containment, such as a metal pan. Any water leakage shall be collected and either filtered or placed into waste bags with other asbestos waste debris.

Unless otherwise specified in the scope of work, the minimum size of the decontamination chambers shall be the following:

Clean Room	3' x 3'
Shower	3' x 3'
Dirty Room	3' x 3'

Abatement work will be stopped if decontamination unit is not kept in acceptable condition.

Storage or consumption of food and/or beverages shall not be permitted inside the containment or within any

of the decontamination chambers. Food or drink consumption within containment will result in the dismissal of the worker from the site.

Whenever and wherever possible, the Contractor shall enclose multiple rooms within a building or wing into a single containment. Where rooms are joined by a common interior hallway or have a common exterior walkway, multiple spaces shall be joined together creating one containment using poly enclosures. When multiple rooms in a building do not have a common interior hallway, multiple rooms shall be joined using a common work chamber built by the Contractor. The common work chamber shall be constructed of wood studs and plywood sheeting for security purposes, and shall be part of the decontamination chamber. Decontamination units and joined “common areas” outside of a building shall have lockable doors or gates created with temporary fencing for security during off-hours.

SECTION 12. WORKPLACE ENTRY AND EXIT PROCEDURES

All workers and authorized personnel shall enter the work area through the worker decontamination enclosure system.

All personnel who enter the work area must sign the entry log, located in the clean room. This log shall have space for the workers name, time in, time out, and be identified with the project name, date, and containment location.

All personnel, before entering the work area, shall read and be familiar with all posted regulations, personal protection requirements, workplace entry and exit procedures, and emergency procedures.

For Class I work, the worker shall proceed first to the clean room and remove all street clothes and don appropriate respiratory protection and disposable coveralls, head covering and foot covering. Hard hats, eye protection and gloves shall also be worn, as appropriate. Clean respirators and protective clothing shall be provided and utilized by each person for <u>each</u> <u>separate</u> <u>entry</u> into the work area. There shall be a location for storage of the street clothes in the clean room.

Personnel wearing designated personal protective equipment shall proceed from the clean room through the shower room and equipment room to the main work area.

Before leaving the work area all personnel shall remove gross contamination from the outside of respirators and protective clothing by brushing and/or wet-wiping procedures. HEPA vacuums with brush attachments may be utilized for this purpose.

The worker shall proceed into equipment room where they remove all protective equipment except respirators. Deposit disposable clothing into an appropriately labeled container for disposal.

Reusable, contaminated footwear such as rubber boots shall be stored in the equipment room when not in use in the work area. This footwear shall be cleaned prior to being removed from the work area. Placing footwear in two sealed 6 mil poly bags is sufficient for moving from one containment to another, but not for moving from one site to another.

Still wearing respirators, personnel shall proceed into the shower area, clean the outside of the respirators and the exposed face area under running water prior to removal of respirator, then shower and shampoo to remove residual asbestos contamination. Various types of respirators will require slight modification of these procedures.

After showering, proceed to the clean room to dry and put on the street clothes.

SECTION 13. DIFFERENTIAL AIR PRESSURE SYSTEMS

Part 13.1 - Negative Pressure Requirements

Negative pressure shall be maintained at 0.030" water differential at all times during abatement activities, including entry/exit and bag out procedures. Contractor shall assign crew members to determine cause of loss of pressure any time containment's negative pressure drops below 0.030" water differential. All work will be stopped in any containment for which the negative pressure drops below 0.025" water differential, until problem is resolved and pressure returns to 0.030" water differential or better.

In the event that containment cannot be brought up to 0.030" water differential, abatement contractor must increase number of negative pressure differential units until a calculated 10 air changes per hour is taking place. The Owner's CAC will assist and review possible remedies to the negative pressure requirement.

All negative pressure units that are installed to the containment system but are shut off or not working, shall be sealed at both the exhaust location and the intake of the machine to prevent back draft which could allow asbestos fiber contamination from the HEPA filter back into the work area.

Part 13.2 - DOP Testing

Contractor shall provide differential air pressure systems for each work area in accordance with Appendix J of EPA "Guidance for Controlling Asbestos-Containing Materials in Buildings," EPA 560/5-85-024.

All HEPA filtered systems used on this project shall be tested and certified by an independent third party company on-site prior to use. Contractors may not test their own equipment. All vacuums and pressure differential units shall meet ANSI Z9.2, using an appropriate testing agent. Written copies or electronic copies of documentation of these tests shall be provided to the Owner's CAC prior to the use of any HEPA system.

DOP, or equivalent, testing shall be conducted on-site, unless stated otherwise in the Scope of Work. All HEPA filtered units, including but not limited to, vacuums and air pressure differential units (negative air units) shall be tested onsite. Testing of air pressure differential units must include testing of the wheel attachments, control panel, seam, rivets of the housing, as well as, the HEPA filter itself.

All HEPA equipped equipment to be used on the project must be delivered to the site empty of all debris, clean and free of dust, and in full operating condition. Covering dirty units with poly, other than the HEPA filter surface, will not be acceptable.

DOP or equivalent testing is required when any HEPA filters are changed during the project

Any negative pressure unit turned upside down, or on its side, must be returned to an upright position and re-DOP tested. Negative pressure units shall not be used on this project while laid on their side or upside down.

In case of a power outage, Contractor must seal exhaust ducts against back draft into containment.

All negative air units shall will have the filter sealed with poly and tape before being shutdown to prevent back drafting before it is moved from the work area.

Part 13.3 - Differential Pressure Recording Requirements

Differential air pressure shall be continuously monitored by using a manometer that measures down to at least three digits to the right of the decimal point. For example, the manometer shall be able to read and display -0.035" wp, which shows three digits to the right of the decimal point. Other manometers not meeting this minimum criteria are not acceptable. The location of the pressure measurement shall be approved in advance

by the Owner's CAC. The location where the air tubing of the manometer is inserted into the work area will be determined by both the contractor competent person and the Owner's CAC.

The pressure differential shall be checked a minimum of every hour during the work shift by the contractor's competent person.

On some projects, it may be specified for the manometer to maintain a printed copy of the negative pressure readings. The manometer readings will require the correct date and time. It will be the contractors responsibility to write on the recording information the location of the reading, including project name and containment location.

Defective or non-operating manometers may require temporary stoppage of work until instrumentation is replaced.

For larger projects at least one manometer station shall be in place for each 25,000 square feet of containment space. Additional manometers may be required on large projects, where a second location is needed for the Owner and representatives.

Part 13.4 - Differential Pressure System

The location of the air filtration units (negative air units) exhaust out of the work area shall require careful consideration with regard to the work being performed and needs of the owner. All air exhaust from negative air units shall be directed out of the building when possible. This can be accomplished through use of flexible and semi-rigid exhaust ducts from the negative air units extending to windows, doors or other openings in the building. The first choice should always be to direct PDU air exhaust out of the building through the Contractor supplied ducts. Any alternative exhaust location of negative air that cannot exhaust out the building shall be determined by the Owner's CAC.

When directing exhaust to a buildings exterior through the use of temporary supplied duct, the Contractor shall select a path of travel for these ducts which does not impede building occupants or other trades, result in creation of a hazard to building occupants, or restrict the closing of entry and exit doors to the building. The exhaust opening must not be within 10' of any air intake vents, open windows or open doors, and must not be directed at paths of travel into or out of the building.

In some very limited cases, it might be possible to exhaust air from a negative air unit into an existing building's exhaust system. When utilizing a dedicated exhaust duct system present within the building the system must be investigated to determine its capability of handling the volume of exhaust air expected to be produced by the pressure differential system. Sufficient air volume of the existing dedicated exhaust duct system should have a minimum of 5X but preferably up to about 10X the total volume capacity of the exhaust of the pressure differential air system. For example, if a single 2,000 cfm negative air unit is to be used, the dedicated exhaust fan system which will exhaust the air produced by the negative air unit should be capable of handling about 10,000 cfm of total exhaust air capacity. Use of permanent dedicated exhaust duct systems may also require temporarily sealing of adjacent registers in the same exhaust system to make up the difference in exhaust volume.

The owner shall provide approval prior to the contractor utilizing any existing dedicated exhaust systems which might be considered, since the dedicated exhaust systems will be required to operate at all times the pressure differential air system is operable, and sealing any adjacent registers may not be acceptable. It is critical to note that a dedicated exhaust system is not the same as a return air duct system which re-circulates air from a given building space back to the HVAC fan unit and ultimately is supplied back to the work space. Return air duct systems will not be allowed for exhaust from negative air units.

Directing exhaust air into an attic or above ceiling space may only be utilized in specific conditions and is

limited to attic spaces with only exposed wood, metal or concrete undersides of roof or flooring systems. The space may not under any circumstances have any existing known or assumed asbestos containing materials present regardless of their condition.

Regardless of the exhaust system utilized, the system and its components shall be inspected daily by the Contractor to ensure compliance with the requirements of this specification, remains in good repair and is otherwise not compromised in any way which could negate its designed purpose. Any deficiencies found in the system being used shall be repaired immediately and if necessary all work will cease until those repairs can be accomplished.

The work area shall have a differential air pressure of at least -0.030 inches water whenever the work is being performed including removal, gross clean-up, encapsulation of surfaces, bag-out operations and worker entry and exit procedures. If pressure differential ever drops below -0.025 inches water differential, all work, other than cleanup of waste on the floor of containment, must be halted until reason for pressure differential drop has been determined and corrected.

Only unused pre-manufactured, reinforced flexible ducts shall be used within the containment area for exhausting of filtered air. Contractor may not construct ducts using poly or other materials that do not maintain the rigidity in the exhaust duct.

All interior of containment PDU's and flexible ducts must be wrapped in poly during all abatement activities. This poly wrap is to be removed after "finish detail" work has been completed, but prior to clearance visual.

Flexible ducts must be supported by solid surface at the point of exit from containment. This may require the Contractor to install plywood, or similar, structure at the exhaust point.

SECTION 14. EXECUTION, WORK SCHEDULE

Part 14.1 - Execution

Owner Responsibilities

The Owner shall provide the Contractor with access to the building during scheduled work hours through their representative. This representative is expected to be the General Contractor in charge of the site. The Owner shall also be responsible for arming and disarming alarm systems on buildings where work will be performed.

The Owner shall also provide the Contractor access to water and electrical hook-ups.

Contractor Responsibilities

The Contractor is responsible for all connections, electrical cords, GFCI's, water hoses, and hose bibs necessary for attachment. GFCI's are required to be used by the Contractor on all electrical circuits in use.

The Contractor and Owner's CAC shall investigate the work area and agree (in writing if necessary) on the pre-abatement condition of the work area.

The Contractor shall post danger signs meeting the OSHA specifications at locations and approaches to locations where airborne concentrations of asbestos may exceed ambient background levels including all doors sealed as a critical barrier and at all entries to asbestos work containments.

When electrical supply within area of abatement poses a hazard, the Contractor, in conjunction with the Owner, shall shut down and lock out electric power to all work areas. The Contractor shall provide temporary power and lighting sources, ensure safe installation, including ground fault circuit interrupters of temporary power sources and equipment by complying with all applicable electrical code requirements and OSHA requirements for temporary electrical systems. The Contractor shall have a licensed electrician shut down and lock out electric power, and setup temporary power and lighting sources. All cost of electricity shall be paid for by the Owner unless specified differently in the Scope of Work. The cost for set-up of temporary power is the responsibility of the abatement contractor unless specified differently in the scope of work.

When plumbing is required to be altered or becomes damaged, the Contractor shall have a licensed plumber disconnect and cap all water as necessary within the work area. Water shall be provided by the Owner from a location near the work area, but not necessarily within the work area.

Shut down and lock out all heating, ventilating and air-conditioning-system (HVAC) components that are in, supply, or pass through the work area. Seal all intake and exhaust vents in the work area with tape and 6-mil polyethylene within the work area at both the interior and on the exterior of the building. Seal any seams in system components that pass through the work area.

Pre-clean all fixed objects in all work areas using HEPA-filtered vacuums and/or wet-cleaning techniques as appropriate and deemed necessary by the Owner's CAC. Careful attention must be paid to machinery behind grills or gratings where access may be difficult but contamination significant. After pre-cleaning, enclose fixed objects in 6-mil polyethylene sheeting and seal securely in place with tape.

Pre-clean all surfaces in all work areas using HEPA filtered vacuums and/or wet cleaning methods as appropriate. Do not disturb asbestos-containing materials during the pre-cleaning phase.

Unless otherwise stated in the scope of work or by agreement with the Owner's CAC all non-asbestos-containing materials left in the work area shall be covered by with 6-mil polyethylene sheeting. If any non-asbestos containing materials become contaminated with asbestos during removal activities these materials shall be disposed of as asbestos-containing materials by the Contractor. The Owner's CAC shall determine the friability of these materials prior to disposal.

Contractor shall seal all windows, doorways, elevator openings, corridor entrances, drains, ducts, grills, grates, diffusers, skylights and other openings between the work area and uncontaminated areas outside of the work area. These openings must be sealed with 6-mil polyethylene sheeting and tape. These protective layers shall be in addition to the two polyethylene layers on floors, ceilings and walls. These openings are referred to as critical barriers. Seal all cracks in critical barrier areas with tape, caulk, or foam prior to sealing critical barriers.

Prior to the Contractor covering critical barriers with additional layers of wall, floor, or ceiling poly, the installation and integrity of critical barrier seals must be approved by the Owner's CAC.

All items attached to asbestos-containing materials and items which cannot be removed without disturbing asbestos-containing materials shall be removed by the Contractor after establishment of containment and negative pressure. If these items are to be "saved and returned" or "reused" by the Owner, the Contractor must remove and clean them without damage. These items must be cataloged using the attached "Return Item Inventory Sheet" provided by the Owner.

Contractor shall cover floors in the work area with polyethylene sheeting. Floors shall be covered with a minimum of two layers of 6-mil polyethylene sheeting. Plastic shall be sized to minimize seams. A distance of at least six (6) feet between seams is sufficient. DO NOT locate any seams at wall/floor joints. Floor sheeting shall extend at least twelve inches (12") up the sidewalls of the work area. Sheeting shall be installed in a fashion so as to prevent slippage between successive layers of material. A layer of 10-mil polyethylene sheeting and/or plywood may be required by the Owner's CAC to protect certain flooring materials -- carpets, hardwood floors, tiles, etc. and will be specified in the scope of work if required. At no time will wall or ceiling materials be permitted to be dropped onto unprotected floors. This includes areas where the floor surfaces contain asbestos.

Contractor shall cover walls in the work area with polyethylene sheeting. Walls shall be covered with a minimum of two layers of 4-mil polyethylene sheeting. Plastic shall be sized to minimize seams. Seams shall be staggered and separated by a distance of at least six feet (6'). DO NOT locate any seams at wall/floor joints. Wall sheeting shall overlap floor sheeting by at least twelve inches (12") beyond the wall/floor joint to provide a better seal against water damage and for pressure differential maintenance. Wall sheeting shall be secured adequately to prevent it from falling away from the walls. This may require additional support/attachment when pressure differential systems are utilized.

In some projects when specified in the scope of work, the Contractor shall cover ceilings in the work area with polyethylene sheeting. Ceilings shall be covered with a minimum of one layer of 4 mil polyethylene sheeting. Plastic shall be sized to minimize seams. Seams shall be staggered and separated by a distance of at least six feet (6'). DO NOT locate seams at wall/ceiling joints. Ceiling sheeting shall overlap wall sheeting by at least twelve inches (12") beyond the ceiling/wall joint to provide a better seal against water damage and for pressure differential maintenance. Ceiling sheeting shall be secured adequately to prevent it from falling away from the walls such as wires attached between walls to provide additional support. Additional support/attachment might be required when pressure differential systems are utilized.

The Contractor shall add clear viewing windows in the containment walls at least 1' x 2' in size. The Owner's CAC will approve quantity and placement of these inspection windows. The Owner's CAC has the right to require more clear viewing windows or require placement of windows to be altered.

The equipment room shall be used for storage of equipment and tools at the end of a shift after they have been decontaminated using a HEPA-filtered vacuum and/or wet-cleaning techniques as appropriate. A six-mil. disposal bag or a drum lined with a labeled 6-mil polyethylene bag for collection of disposable clothing and contaminated supplies shall be located in this room.

The Contractor shall be responsible for all clean-up and costs associated with the decontamination of occupied spaces adjacent to any containment where removal of asbestos-containing material is conducted.

The Contractor shall also be responsible for damage to building finishes and costs associated with removal of tape glue, staining of wall finishes, or destruction of wall surface integrity from spray glue application, staples, nails, hooks, etc. installed to support containment. It is the responsibility of the Contractor to identify with the General Contractor all aspects of the project requirements pertaining to these types of damages.

There shall be a sufficient number of negative air units in the work area to maintain a minimum -0.030 " water pressure in the regulated area. A sufficient number of negative air units shall be installed to maintain a minimum of four air changes per hour. All negative air units shall have pre-filters at the intake of the system which must be changeable from inside the containment area. Openings made in the enclosure system to accommodate these units shall be made airtight with tape and/or caulking as needed. They shall NOT be exhausted into occupied areas of the building. Twelve inch (12") extension ducts shall be used to reach from the work area to the outside when required. Careful installation, air monitoring and daily inspections shall be done to ensure that the ducts does not release fibers into uncontaminated building areas.

Once the containment has been constructed and reinforced as necessary with pressure differential units in operation as required, the Contractor shall test the enclosure for leakage utilizing smoke tubes. The containment shall be repaired or reconstructed as needed.

Contractor shall clearly identify and maintain emergency and fire exits from the work area.

Work shall not begin each day until:

a. Enclosure systems, or modifications thereof, have been designed and built by the Contractor and each step approved by the CAC. If design of containment is to be altered in any way, after it is approved by the CAC, a written explanation of how and why the containment is to be altered must be submitted to the Owner's CAC for approval.
b. Pressure-differential systems are functioning according to an acceptable design.
c. All pre-abatement submissions, notifications, postings and permits have been provided and are satisfactory to the Owner or its representative.
d. All equipment for abatement, clean-up and disposal is on hand.
e. All current worker training documents are present.
f. The Contractor has installed all required clear transparent viewing windows made of plastic or equivalent, in the containment so that activities can be visually monitored by the Owner's CAC from outside the containment. This window shall measure approximately 1' wide by 2' high. It shall be installed at a location approved by the Owner's CAC.
g. All negative air units and vacuums have received and passed onsite DOP testing.
h. Contractor has at least one competent person at each site in which work is taking place.
I. All necessary documents and information have been posted or are on the work site. See Section 2.

Part 14.2 - Power Outage Procedures

The following procedures shall be followed in the event of a power outage (no matter the source of the outage):

1. Immediately stop abatement activities.
2. Wet all debris and/or friable materials within the containment.
3. Depart containment area as soon as reasonable. Shower out or use Hudson type water sprayers to decontaminate worker if shower is inoperable due to power outage.
4. Seal containment area including:

    A. Decontamination units
    B. Makeup air ports
    C. Bag out chambers

If a generator is required by the project conditions, made necessary due to extended power outages, or chosen to be used by the abatement contractor the following issues must be addressed:

1. Generator must not violate any local noise ordinances nor disturb adjacent building occupants.
2. Generator exhaust must not be allowed to contaminate the makeup air being pulled into the containment. It must, also, not be allowed to mix with HVAC air supplied to adjacent occupied buildings.

Part 14.3 - Work Schedule

Contractor shall schedule work as required to meet the needs of the project. During progress of work, it shall be the Contractor's responsibility to inform the Owner's CAC 48 hours or earlier of any and all work shifts to be performed. If at least 48 hours notice is not given, the proposed work shift may be canceled by the Owner's CAC.

Contractor shall be responsible for informing the Owner's CAC in writing at least 48 hours or earlier prior to the proposed addition of any off hours work, work expected to include more than one shift per day, or extend beyond 10 hours in a shift. If 48 hours notice is not given, work shift may be canceled by the Owner's CAC. The Owner's CAC reserves the right to deny any changes in the work schedule.

If the Contractor wishes to work on a Federal or State holiday, more than five days a week, or more than 9 hours a day, Contractor becomes responsible for cost of project management fees to cover extended hours. If the Contractor fails to appear on-site without notifying Owner's CAC at least 24 hours in advance of a scheduled work shift, the Contractor becomes responsible for all Owner's CAC travel fees, on-site time fees, and other associated project management fees for that day.

At no time shall a work shift extend beyond 12 hours in a day.

SECTION 15. REMOVAL PROCEDURES

Wet all asbestos-containing material with an amended water solution using equipment capable of providing a fine spray mist, in order to reduce airborne-fiber concentrations when the material is disturbed. Saturate the material to the substrate; however, do not allow excessive water to accumulate in the work area. Keep all removed material wet enough to prevent fiber release until it can be containerized for disposal. Maintain high humidity in the work area by misting or spraying to assist in fiber settling and reduce airborne concentrations. Wetting procedures are not equally effective on all types of asbestos-containing materials but shall be used in all cases.

Saturated asbestos-containing material shall be removed in manageable sections. Removed material should be containerized immediately. Surrounding areas shall be periodically sprayed and maintained in a wet condition until visible material is cleaned up. Gross debris shall be cleaned up and bagged prior to end of each shift.

Material removed from building structures or components shall not be dropped or thrown to the floor. Material should be removed as intact sections or components whenever possible and carefully lowered to the floor.

Waste containers shall be sealed when full. Double bagging of waste material into 6 mil plastic is required. Bags shall not be overfilled. They should be securely sealed to prevent accidental opening and leakage by tying tops of bags in an overhand knot or by taping in gooseneck fashion. Do not seal bags with wire or cord.

Asbestos-containing waste with sharp-edged components (e.g., nails, screws, metal lath, tin sheeting) will tear the polyethylene bags and sheeting and shall be placed into drums or burlap bags and then into leak tight containers for disposal.

After completion of all stripping work, surfaces from which asbestos-containing materials have been removed shall be wet-brushed and sponged or cleaned by some equivalent method to remove all visible residue.

After the work area has been rendered free of visible residues and verified clean by the CAC, a thin coat of a satisfactory encapsulating agent shall be applied to lock-down non-visible fibers on all surfaces in the work area including structural members, building components and plastic sheeting on walls, floors and covering non-removable items.

SECTION 16. WASTE CONTAINER PASS-OUT PROCEDURES

Asbestos-contaminated waste that has been containerized shall be transported out of the work area through the waste transfer airlock or through an approved pass-out arrangement.

Waste pass-out procedures shall utilize two teams of workers, an "inside" team and an "outside" team. The inside team, wearing appropriate protective clothing and respirators for inside the work area, shall clean the outside, including bottoms, of properly labeled containers (bags, drums, or wrapped components) using HEPA vacuums and wet-wiping techniques and transport them into the waste container pass-out airlock. Provisions for spray cleaning exterior of bags, equipment, and removable items shall be present in the waste pass-out. Waste water from this operation shall be collected and filtered as required through a 5.0 micron filter.

The three-chamber system is utilized in the following manner. Workers inside the work area place the waste in the leak tight waste container, which is usually a 6 mil bag. They then rinse the bag and seal it. They hand it to a worker in the dirty chamber room who inspects the bag and, if it is clean, places it in the second leak tight waste container. The second leak tight waste container is either another bag or a lined rigid-wall container such as a barrel or box. The worker then seals the second container and may attach the proper labeling. The worker places the container in the middle chamber (shower containment). The worker in the clean chamber then reaches in and lifts the container into the clean chamber. The worker inspects it and if not already labeled, attaches the proper labels. The worker then passes the container to the outside worker who transports the container either to the waste transport vehicle or to a holding area. At no time shall z-flaps of transfer system chambers be taped, held or otherwise blocked open. The Contractor must not allow more than one poly airlock doorway to be open at any one time. This prevents a tunnel system and a breakdown in the isolation of the work area. Negative pressure must be maintained during all waste load-out activities.

The contract documents or the Owner's CAC may in allow a one or two chamber system for waste pass out to be used for some projects, as long as the Owner's CAC agrees to the work practice. As with a three-chamber system, in a one or two chamber system, the Contractor may never allow more than one poly air flap doorway to be open at any one time. For example, a one chamber system would function in the following manner. Workers in the work area rinse and seal the initial waste container. They hand the initial container to a worker in the load-out chamber. That worker verifies that the container is clean and then places it into the second container which will be either another bag or lined ridged-wall container depending on the specifications. The load-out worker then seals the container and applies the appropriate labels. The sealed, labeled container is then passed to the outside workers who transport it to the waste transport container or holding area.

The exit from this airlock shall be secured to prevent unauthorized entry.

SECTION 17. CLEAN-UP PROCEDURE

Part 17.1 - Clean-up Procedure

Remove and containerize all visible accumulations of asbestos-containing material and asbestos-

contaminated debris utilizing rubber dust pans and rubber squeegees to move material around. DO NOT use metal shovels to pick up or move accumulated waste. Special care shall be taken to minimize damage to floor sheeting.

Wet-clean all surfaces in the work area using rags, mops and sponges as appropriate. Note: Some HEPA vacuums might not be wet-dry vacuums. To pick up excess water and gross wet debris, a wet-dry shop vacuum with HEPA filter may be used.

Airless sprayers and water hoses shall not be used in a “power washing” fashion on any surfaces unless approval is provided by the CAC.

The Contractor shall remove each cleaned layer of polyethylene sheeting from walls and floors. Windows, doors, HVAC system vents and all other critical barriers shall remain sealed. The pressure differential units shall remain in continuous operation. Decontamination enclosure systems shall remain in place and be utilized.

Remove all containerized waste from the work area. Decontaminate all tools and equipment and remove at the appropriate time in the cleaning sequence.

Contractor shall clean work area and conduct a pre-clearance visual. Once pre-visual has been passed by the Contractor, the containment shall allow time for the airborne dust to settle within containment for 24 hours, then return and re-clean by HEPA-vacuuming and/or wet-cleaning all objects and surfaces in the work area again. At this point Owner’s CAC will conduct the final visual. If the final visual inspection fails, the Contractor must re-clean area the work area until a final visual inspection is found acceptable to the CAC. Once the final visual inspection is passed by the CAC, Contractor will be allowed to encapsulate the containment area, unless encapsulation of containment has been disallowed in the scope of work or material specific specification.

The Contractor may request a reduction in the 24 hour waiting period, if personal samples collected during the abatement work and detail clean-up work have shown fiber levels below the PEL. Reduction of waiting period must be made in writing, accompanied by personal sample results from this project. The Contractor must acknowledge that reduction in waiting period may result in failed clearance air samples and that retaking and re-analyzing these air samples will be at the Contractor’s expense. Any reduction in waiting time will be at the discretion of the Owner’s CAC and client.

Part 17.2 - Visual Clearance Criteria

The **Contractor** shall perform a pre-final visual inspection of the regulated work area and adjacent surfaces prior to requesting that the Owner’s representative conduct a final visual inspection. The pre-final visual performed by the Contractor shall verify that all materials have been completely removed from the work area, and that the work area meets the requirements specified in Section 17.

In addition, the level of cleanliness in all work areas where asbestos has been removed shall meet the final clearance criteria established in the ASTM E1368-90 Standard Practice for Visual Inspection of Asbestos Abatement Projects.

Upon completion of the pre-final visual inspection by the Contractor a final visual of the containment area will be performed by the Owner’s representative. The CAC will determine the clearance criteria for the project. At a minimum, no three dimensional debris shall be left within the work area; all poly shall be wet wiped so that no visible dust or debris is left; the decontamination chambers shall be clean of all debris; the waste transfer area shall be clean of all debris; all equipment and supplies shall be clean of all debris. The Contractor shall not be released to encapsulate the containment until receiving acceptance by the CAC stating the removal area and the containment have met the criteria of the CAC for completeness of removal and

cleanliness of the containment barriers and surfaces.

The Owner's CAC will conduct the final visual inspection of the work area for visible residue. If any accumulation of residue is observed, it will be assumed to be asbestos and the 24 hour settling period/cleaning cycle will be repeated.

Additional cleaning cycles shall be provided by the Contractor, as necessary, at no cost to the Owner until the specified clean criteria have been met.

Owner's CAC has final say on whether or not an area meets these requirements.

Following the satisfactory completion of clearance-air monitoring, remaining barriers may be removed and properly discarded as non-asbestos containing waste. If contamination exists behind these critical barriers, additional cleaning will be required.

The Owner, Contractor and Owner's CAC shall jointly review the work area and make a damage assessment, after clearance air samples have passed and containment has been torn down.

SECTION 18. CLEARANCE AIR MONITORING

When required, clearance air sampling shall be performed following the requirements specified in Section 18 after encapsulation of the containment has taken place and a sufficient amount of time has passed to allow the encapsulant to dry. The Owner's CAC shall determine the method of analysis to be used based on the amount and type of material removed within a containment. If at a K through 12 site and the quantity of Asbestos-Containing Material (ACM) exceeds 160 square feet or 260 linear feet, analysis of air samples must be by transmission electron microscopy (TEM) per US EPA AHERA regulations.

Clearance-air monitoring shall proceed 24 hours after lock-down or when the area is dry, whichever is later.

Contractor may request a reduction in the 24 hour waiting period, if personal samples collected during the abatement work and detail clean-up work have shown fiber levels below the PEL. Reduction of waiting period must be made by the Contractor accompanied by personal sample results from this project. The Contractor must acknowledge that reduction in waiting period may result in failed, or overloaded (with encapsulant) clearance air samples and that retaking and re-analyzing these air samples will be at the Contractor's expense. Reduction in waiting time will be at the discretion of the Owner's CAC and the Owner.

Air samples will be taken using the "aggressive" air sampling techniques described in the AHERA regulations unless noted differently in the scope of work for non-AHERA sites. In the case aggressive samples cannot be collected (e.g. in a dirt floor area) this will be noted in the Owner's CAC's notes.

If PCM analysis is used for clearance air samples, all clearance samples at all locations shall indicate a fiber concentration of less than or equal to 0.01 f/cc for release of the work area.

If TEM analysis is to be used for clearance air samples, then the clearance criteria shall be the same as AHERA, unless otherwise specified in the scope of work.

Areas exceeding these levels shall be re-cleaned and, if appropriate, re-encapsulated at no additional cost to the owner. All areas where clearance air samples fail will be re-tested.

The Contractor shall be responsible for all subsequent air sampling costs if air samples fail to meet clearance criteria levels. This cost includes four hours of time for Owner's CAC personnel to collected the air samples and the cost of laboratory analysis.

SECTION 19. MONITORING

Owner reserves the right to perform air and performance monitoring at any time.

Contractor shall provide personal air monitoring in accordance with Cal/OSHA regulations. Results shall be made available to the Owner's CAC within 72 hours of collection. Hard copies or electronic copies of these results shall be supplied to the Owner's CAC within 7 days of collection. Failure to supply these sample results in specified time may cause work to be stopped until all delinquent results have been submitted. Loss of Contractor work time because of non compliance with the provisions of this paragraph will not extend the date for work completion.

Owner's CAC may take air samples prior to, during, and after the project. Work shall not be considered complete until all air sampling has been completed and satisfactory levels have been obtained. Satisfactory levels shall be those established by AHERA, unless more stringent requirements have been identified in any other section of this Specification.

In areas where soil contamination may be present, soil samples must meet specified criteria in any other section of this specification prior to clearance air samples collection.

Owner, or Owner's CAC, shall be authorized to issue a STOP WORK order whenever the Contractor's work or protective measures are not in accord with published regulations or contract specifications.

SECTION 20. DISPOSAL PROCEDURES

Part 20.1 - Disposal Procedures

Disposal bags shall be of 6 mil poly, pre-printed with labels as required by DOT, Cal/OSHA and the Department of Toxic Substance Control (DTSC) regulations.

Disposal drums shall be metal or fiber board with locking ring tops to be used only if required and/or allowed by selected dump site.

Stick-on labels as per OSHA and DTSC requirements for disposal containers shall be provided. All containers shall be labeled in accordance with DOT, Cal/OSHA and the DTSC regulations that require a "Caution" label and a "Hazardous Waste" label with the generator's name, address, and Manifest Document number.

As the work progresses, to prevent exceeding available storage capacity on site, sealed and labeled containers of asbestos-containing waste shall be removed and transported to the prearranged disposal location.

Disposal shall be at permitted waste facilities for the type of waste. Transport vehicles shall be marked with the sign prescribed by OSHA during loading and unloading to warn people of the presence of asbestos.

All dump receipts, trip tickets, waste manifests, Waste Shipment Record (WSR) and other documentation of disposal shall be delivered to the Owner, for its records. The manifest shall be signed by the Owner, the waste transporter, and the Disposal Site Operator as the responsibility for the material changes hands. If a second waste transporter is employed, his name, address, telephone number and signature should also appear on the form. The WSR, if used, shall be signed by the Owner or its agent and the disposal site operator.

All manifests shall have asbestos waste identified as: "RQ, Asbestos, 9 NA2212, III". This requirement may be changed as new regulations are issued. See "Waste Disposal" requirements at end of "General

Requirements".

All manifests shall be accompanied by a "Notice and Certification". A signed copy of this must be provided to the Owner or its agent.

Part 20.2 - Transportation to the Landfill

Once drums, bags and wrapped components have been removed from the work area, they shall be loaded into a fully enclosed truck or waste container, which has been lined with 6 mil poly sheeting on the walls and floor. The exception top a fully enclosed waste truck is for roofing projects and when waste loads are generated and placed into open top lined waste trucks that will be “burrito wrapped”.

When moving containers, utilize hand trucks, carts and proper lifting techniques to avoid back injuries. Trucks with lift gates are helpful for raising drums during truck loading.

Any debris or residue observed on containers or surfaces outside of the work area resulting from clean-up or disposal activities shall be immediately cleaned up using HEPA filtered vacuum equipment and/or wet methods as appropriate.

No waste containers shall be on site which contain other hazardous waste, or hazardous waste from any other source or job site. Waste from multiple sites of the Owner within the same waste container is acceptable; however, it must be manifested separately.

If Contractor is storing waste from various sites of one owner, all transportation vehicles shall be covered by the same regulations as the waste container or truck being used to haul the waste to the dump. If equipment or supplies are to be left in vehicles during hauling of waste to waste container or truck, waste and equipment/supplies must be separated by a solid (wood or metal) barrier which has been sealed as a critical barrier. A poly wall barrier is not sufficient.

Waste container, truck, or storage bin must be locked at all times except when being filled.

It is the Contractor's responsibility to see that all waste containers, trucks, and storage bins arrive on site completely free from debris.

The contractor shall provide a weight receipt that identifies the net weight of the material being discarded.

Part 20.3 - Disposal at the Landfill

Upon reaching the landfill, trucks are to approach the dump location as closely as possible for unloading of the asbestos-containing waste.

Bags, drums and components shall be inspected as they are off-loaded at the disposal site. Material in damaged containers shall be re-packed in empty drums or bags as necessary. Local requirements may not allow the disposal of asbestos waste in drums. Check with appropriate agency and institute appropriate alternative procedures.

Waste containers shall be placed on the ground at the disposal site, not pushed or thrown out of the trucks.

Personnel off-loading containers at the disposal site shall wear protective equipment consisting of disposable head, body and foot protection and, at a minimum, half-face, air-purifying, dual cartridge respirators equipped with high-efficiency filters.

Following the removal of all containerized waste, the truck cargo area shall be decontaminated using HEPA

vacuums and/or wet methods to meet the no visible residue criteria. Poly sheeting shall be removed and discarded, along with contaminated cleaning materials and protective clothing, in bags or drums at the disposal site.

SECTION 21. PATENTS AND PREVAILING WAGES

Part 21.1 - Patents

Contractor shall pay all royalties and license fees required for the performance of the work. Contractor shall defend suits or claims resulting from Contractor's or any Sub-contractor's infringement of patent rights and shall indemnify Owner and Owner's representative from losses on account thereof.

Part 21.2 - Prevailing Wage Requirements

The asbestos abatement contractor is fully and totally responsible at all times for compliance with payment of prevailing wage rates pursuant to provisions of the California Labor Code, for compliance with Division 2, Part 7, Chapter 1, California Labor Code, including but not limited to Section 1776; and for compliance with California Labor Code, Section 1777.5 for all apprentice able occupations.

SECTION 22. PERMITS AND FEES

If any permits are required to be issued for any of the Work to be performed by Contractor, Sub-contractor(s) or Sub-subcontractor(s) as part of the Project, it shall be the sole responsibility of the Contractor to expeditiously obtain all such permits and any costs incurred by the Contractor in obtaining such Permits shall be included within the Contract Price.

SECTION 23. SPECIFIC PROCEDURES AND REQUIREMENTS

NOTE: All Specific Procedures and Requirements listed in Section 23 shall be reviewed by the Contractor along with the Scope of Work issued for the project. If any perceived conflicts are present between the Scope of Work and these specifications or within the General Requirements specification itself, the Contractor shall ask for a written interpretation from the Owner's CAC prior to submission of his bid. If conflicts in the "Scope of Work" and this specification or with the General Requirements specification itself are discovered after the start of abatement, the more stringent specification and/or requirements will be enforced. The Owner's CAC shall make the determination as to what which requirements and/or specifications are more stringent.

Part 23.1 - General Repair of Damaged or Removal of Thermal System Insulation (TSI)

Where TSI has been damaged, and it is feasible to repair the small nicks, cuts, and exposed ends, the following procedures shall be performed:

1. Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

2. Place 4-6 mil poly sheeting directly under the area to be worked to collect any fallen debris or repair compound.

3. Half-face respirators and disposable coveralls shall be used during this work.

4. The area shall be restricted to those personnel involved in the work, so posting of the accesses is required. In some cases, poly shall be used to cover the access points.

5. A HEPA vacuum must be in the immediate area to pre-clean any debris observed surrounding the damaged section, or in the event of a mishap.

6. If work is performed indoors, the ventilation system shall be off in the areas worked in to prevent fiber distribution. The ventilation supply, return and exhaust ducts shall be sealed with 6 mil plastic sheeting and duct tape.

7. It may be necessary to remove small sections of other insulation material, such as fiberglass, if debris from the damaged pipe covering has contaminated it.

8. In some cases HEPA vacuuming the damaged section will collect all loose, hanging, friable insulation material prior to any further repair work.

9. Very small cracks, holes, nicks, and cuts can be repaired with only a joint compound or with a single layer of wettable cloth and appropriate bridging encapsulant. Larger sections of damaged pipe covering, particularly where pipe hangers or metal channel have damaged the insulation, will require at least two layers of wettable cloth such as HardCast by Carlisle Industries.

10. Where the pipe covering cannot be removed completely from penetrations in the walls, floors, or ceilings, the pipe covering shall be removed at least 1" into the opening and sealed with a bridging encapsulant to grade. The Contractor may choose to fill large gaps with fiberglass insulation, prior to sealing with the encapsulant.

11. All of the Contractor's materials, including poly sheeting, tape, joint compound, etc. shall be removed at the completion of the work performed.

12. Full removal of interior TSI shall always be performed within a negative pressure enclosure.

13. Removal of TSI from exterior areas or below surface grade shall be performed within a regulated area. Full coverage of insulation material with poly sheeting shall be made prior to removal of any pipe component. Glove bags shall be used to remove TSI at areas where the pipe will be sectioned.

Part 23.2 - Glove Bag Technique Requirements

Where glove bag technique is specified for removal of Thermal System Insulation (TSI), or in those areas where the Contractor opts to use glove bags, all of the following conditions must be met:

1. Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

2. The Contractor shall follow the procedures recommended by the manufacturer of the glove bags, and the specifications required by Federal OSHA and Cal/OSHA regulations.

3. All critical openings shall be sealed prior to set up of the containment.

4. At least one layer of 6 mil poly must be used to fully enclose/contain the abatement area.

5. Stationary objects in the immediate area of the room which cannot be removed from the work area must be covered with at least one layer of 4 mil poly sheeting after being pre-cleaned.

6. A minimum three stage decontamination unit with a shower shall be contiguous with the containment for areas requiring removal of more than 6 linear feet of TSI.

7. Negative pressure shall be established and a recording manometer shall be attached to the containment per Section 13.

8. A HEPA filtered vacuum shall be in the immediate area for use in conjunction with the bags or in case of a spill.

9. Glove bags may not be used on surfaces where temperatures exceed 150 degrees Fahrenheit.

10. Glove bags may be used only once, and may not be moved or slid for removal of a second section of TSI.

11. At least two persons shall perform Class I glove bag removal as defined by Federal and Cal/OSHA.

12. Before beginning the operation, loose and friable material adjacent to the glove bag operation shall be wrapped and sealed in two layers of 6 mil poly sheeting or otherwise rendered intact.

13. The Contractor shall apply a sufficient volume of amended water to all pipe covering scheduled for removal while it is enclosed in the glove bag.

14. Prior to placement in the disposal bag, glove bags shall be collapsed by removing air within them using a HEPA filtered vacuum.

15. Upon detachment, the glove bag must be immediately placed into at least two 6 mil thick disposal bags. The disposal bags must be sealed using the "gooseneck" sealing technique.

16. Where pipes enter walls, floors, or ceilings which are not within the scope of the project, the pipe covering shall be removed at least 1" into the structure and the pipe covering end must be sealed with bridging encapsulant and/or wettable cloth.

17. If the Contractor chooses to use a Negative Pressure Glove Bag System, Negative Pressure Glove Box System, or Water Spray Process System in lieu of the traditional Glove Bag System, the Contractor shall submit to Owner's CAC detailed written procedures on those systems which will be used. In addition, air sampling data, generated by the Contractor, must be provided to Owner's CAC. Owner's CAC must provide prior approval to alternate techniques and approaches to those specifications detailed here.

18. The Contractor is responsible for salvage and decontamination of all pipe system supports, hangers, brackets, saddles, etc. These items shall be inventoried by the Contractor, and verified by the Owner's CAC before and after abatement. The Contractor will be responsible for replacement of any items lost or damaged.

19. The Contractor shall be responsible for ensuring the piping system remains adequately supported at all times. This may be achieved by readjusting existing hanger brackets as insulation is removed, or by other approved methods, such as inserting wood blocks to replace the thickness of the removed insulation.

Part 23.3 - Mini-Cube Enclosure Requirements

1. Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

2. For the purposes of these specifications, "mini-cube enclosure", enclosure", "mini-enclosure", and "mini-cube" are all used interchangeably and mean the same. The mini-cube enclosure is required to be constructed whenever small sections of walls, ceilings, or pipe insulation are to be removed for electrical, plumbing, mechanical, etc., work. The purpose is to create an enclosed and controlled work environment while removing asbestos or accessing an attic space which is contaminated.

3. Enclosure walls and floors must be constructed of at least one layer of fire-rated 6 mil poly sheeting. No visible holes, cracks, penetrations, etc. shall be within this enclosure. The upright frame shall be adjustable in order to butt the top of the enclosure to the wall or ceiling area. A single drop layer of 6 mil poly sheeting shall be put down and removed daily at the end of the work shift.

4. Since the top of the enclosure must be open in the chamber where ceiling access will take place, special care must be taken prior to moving the enclosure. If the mini-enclosure is designed to be portable, the enclosure must be sealed at the top prior to being moved to the next location. This may be achieved by temporarily sealing the top with poly and tape from the inside.

5. For access to an attic space, position the enclosure at the location to be worked. The enclosure must be butted up to the ceiling surface to form a semi-seal between the top of the enclosure and the ceiling. The enclosure can then be completely sealed to the ceiling, using tape. After a seal has been established, access into the ceiling can then proceed.

6. A HEPA vacuum shall be used to establish "negative pressure" or airflow into the enclosure. This shall be verified by using ventilation smoke tubes.

7. The following equipment and materials, at a minimum, must be present inside the mini-enclosure "dirty" chamber:

   6 mil poly bag for waste.

   Flashlights or drop light as appropriate.

   Daily change of 6 mil poly sheeting drop layer.

   Other tools needed to perform task.

   Clean potable water in a Hudson-like sprayer.

   HEPA Filtered Vacuum

8. The outside of the poly-flapped entry to the mini-cube must be posted with the CAL/OSHA required warning signs.

9. Clean disposable coveralls must be worn entering the mini-enclosure, and must be removed prior to leaving the mini-enclosure. Depending upon the work being performed, the Contractor may choose to "double suit" in disposable coveralls.

10. For work involving removal of greater than 25 linear feet of TSI, or greater than 10 square feet of asbestos containing surfacing material, regardless of method to be used, a shower must be attached to the mini-cube enclosure and be contiguous with the work environment, and comply with all other requirements in related sections of this Specification.

11. If there is removal of greater than 3 linear feet of TSI, or greater than 3 square feet of surfacing material, regardless of the method used, the enclosure must remain in place until a final visual is passed. Clearance air samples may be required and if so will be collected by the Owner's CAC. Where work involves less than these quantities, only a final visual inspection by Owner's CAC will be required prior to removal of the mini-enclosure.

Part 23.4 - Roofing and HVAC Caulking Abatement Requirements

Not Applicable

Part 23.5 - Vinyl Floor Tile (VFT) & Associated Adhesive Abatement Requirements

General Requirements

Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

For the purposes of this project any direction to remove asbestos-containing or assumed asbestos-containing VFT shall include the removal of the base cove, as well as, the adhesive/mastic used to secure the VFT and/base cove regardless of its asbestos content. Any mastic which has not been tested for asbestos content must be assumed to contain asbestos and removed by the abatement contractor prior to the performance of a final visual by the Owner's CAC, and final air testing of the containment.

Removal of asbestos-containing VFT shall require a negative pressure enclosure/containment be constructed prior to removal, including installation of critical barriers, a splash guard of plastic at the lower 3' of wall from floor level, a sufficient number of DOP tested negative air units to attain a level of at least -0.030" of negative air pressure within the containment, a manometer, and at a minimum, a three-stage decontamination unit with an operational shower and water filtration system. Smaller areas of floor tile and mastic removal may only required a single stage decontamination area without the shower and will be described in the scope of work.

Whenever and wherever possible, the Contractor shall enclose multiple rooms within a building or wing into a single containment. Where rooms are joined by a common interior hallway or have a common exterior walkway, multiple spaces shall be joined together creating one containment using poly enclosures. Where multiple rooms in a building do not have a common interior hallway, multiple rooms shall be joined using a common work chamber built by the Contractor. The common work chamber shall be constructed of wood studs and plywood sheeting for security purposes, and shall be part of the decontamination chamber. Decontamination units and joined "common areas" outside of a building shall have lockable doors or gates created with temporary fencing for security during off-hours.

Bead blasting of materials will only be allowed with approval of Owner. Contractor must declare use of bead blasting to Owner/Owner's Representative prior to use of this method, since this is a mechanical method. If a solvent is used, the negative air unit exhaust shall be directed down wind of make-up air vents a sufficient distance to preclude the re-entrainment of vapors back into the building. Any solvents used for removing adhesive/mastic shall be non-toxic, low odor, non-flammable, and compatible with the new flooring adhesive/mastic.

A safety data sheet for the solvent(s) proposed for use shall be provided in the pre-construction submittal package, all solvent(s) must be approved by the Owner's CAC prior to their use.

Except as amended here and in the "Scope of Work" Section, all other Sections of these specifications shall be followed.

Contractor Responsibilities

1. The Contractor shall provide all necessary notifications, equipment, tools, materials, lighting, labor, etc. to perform the work. Notification as appropriate to OSHA, EPA, or the delegated Air Quality Management District is the responsibility of the Contractor.

2. All HEPA equipment to be used on the project must be delivered to the site empty of any debris,

clean, free of dust, and in full operating condition. HEPA equipment shall be DOP tested at the beginning of the set-up phase and prior to installation into the containment or use on the project. Any equipment removed from the site for more than 10 working days must be DOP tested again prior to re-use on the project.

3. DOP certification testing shall be observed and witnessed by an Owner's CAC. Copies of DOP test results and certification must be submitted to Owner's CAC within 24 hours of the testing being performed.

4. All poly sheeting to be used for the construction of full enclosures/containments must be fire retardant. SDS information reflecting this requirement must be submitted prior to use.

5. The Contractor shall be responsible for all clean-up and costs associated with the decontamination of occupied spaces adjacent to any containment where removal of asbestos-containing material is conducted. The Contractor shall also be responsible for damage to building finishes and costs associated with removal of tape glue, staining of wall finishes, or destruction of wall surface integrity. It is the responsibility of the Contractor to identify with the General Contractor all aspects of the project requirements pertaining to these types of damages.

General VFT & Adhesive/Mastic Removal Instructions and Requirements

1. For the purposes of this project, removal of VFT and associated adhesive/mastic by any method shall be performed by personnel who are properly trained and accredited to perform Class II work.

2. No personnel are allowed into the containment area during actual removal work without proper respiratory and personal protective equipment. At a minimum, this shall include half-face negative pressure respirators, full body coveralls, rubber boots, and gloves. During removal of adhesive/mastic with solvent or other organic based liquid, combination respiratory cartridges (organic vapor/HEPA) shall be worn, by workers to protect against asbestos and the solvent. Rubber gloves shall also be worn to protect workers skin from the solvent material. No street clothes or shoes shall be worn inside containment during the removal process.

3. All doors, windows, and penetrations into the room(s) shall be sealed with poly sheeting. All ventilation systems shall be locked-out and sealed with critical barriers of either poly sheeting or plywood sheeting. No spray glue may be used on any Owner property or building surface.

4. The splash guard shall be a minimum of 3 feet in height from the base of the wall upward.

5. Based on the size of the enclosure/containment, a three stage decontamination unit shall be put into place and be fully operable.

6. Sufficient negative air units shall be installed which will provide a minimum of four air changes per hour and -0.030" air pressure differential. A manometer with an recording chart shall be installed and operational. The manometer chart shall reflect the location, times, and dates of all measurements recorded. Once these requirements have been met and the negative pressure has been established, the Contractor shall request a pre-start visual inspection from Owner's CAC.

7. When the Contractor has passed the pre-start visual inspection, removal of base cove/boards may be conducted. Base cove adhesive shall be removed completely on hard surfaced walls where damage to the substrate will not occur, or only to a point of smoothing out high spots on walls which will become damaged due to the work to be performed. Full removal is not expected unless the Contractor is notified in writing on these types of soft substrate surfaces and if required in the scope of work.

8. Sufficiently wet VFT with amended water prior to and during the removal phase of work, and place into waste containers for disposal. Acceptable methods of containing VFT waste materials include placing VFT into clear properly labeled 6 mil poly bag and deposit this bag into a lined fiberboard drum. The drum shall be sealed when filled and placed into a waste container for disposal.

9. Method of removal pertaining to asbestos-containing adhesive/mastic shall be at the discretion of the Contractor, except methods which are noted in this Exhibit that are prohibited. Hand scraping, solvents, and wet buffing with solvents are acceptable methods. If the Contractor chooses to use solvents, exhaust of negative air units shall be directed downwind as much as possible, or a sufficient length of exhaust hose will be required to prevent re-entrainment of the vapors.

10. To minimize damage to the existing paint above the base cove, the contractor shall use a utility knife to cut score the paint at the intersection of the base cove. This will allow removal of the base cove with minimal damage to the paint layer.
11. Any solvents used for removing adhesive/mastic shall be non-toxic, low odor, and non-flammable. A SDS for the solvent shall be provided and subject to approval by the Owner's CAC prior to use.

12. Upon completing the removal of all floor tiles and adhesive/mastic, the Contractor shall remove the splash guard from the containment walls, and conduct wet wiping on all surfaces within the containment/enclosure.

13. If a solvent was used to remove any VFT adhesive/mastic, the Contractor shall wash the floors thoroughly using a solution of trisodium phosphate (TSP), or equivalent, and water. Sufficient water shall be used for final rinsing of the floor for a clean finish.

14. It is the sole responsibility of the Contractor to reduce concentrations of any solvents used to a level which will allow new adhesive/mastic to be applied, if new flooring is to be installed. Owner's CAC will not test the floor for PH levels, and will not attest that the solvents used have been reduced in any way.

15. Solvent removal may only be performed on substrate that will be demolished. District requires the use of media blasting or abrasive grinding with HEPA vacuum attachment on any concrete substrate that will remain to accept new flooring.

Final Visual Inspection

1. Upon the completion of all activities listed above, the asbestos contractor shall provide their own visual inspection prior to Owner's CAC, and shall be present during the inspection by Owner's CAC to remove/clean additional surfaces as needed, prior to encapsulation.

2. The final visual inspection will include an evaluation of all surfaces within the containment area, with emphasis placed on the completeness of materials removed from the floor area. Any three dimensional debris identified by the Owner's CAC, which can be seen using a flashlight placed on the floor and directed across the floor, shall be removed as directed with the use of a HEPA vacuum and other tools as necessary to remove the material. The Contractor shall thoroughly clean all equipment inside the containment, including all parts of the negative air units, and new pre-filters shall be installed into all negative air units.

Disposal Requirements

1. Asbestos containing floor tile and mastic waste may be disposed as a non-friable non-hazardous waste stream if they are removed by manual methods. If the materials are removed by mechanical

means, the waste stream shall be disposed as friable hazardous asbestos waste and will require a Uniform Hazardous Waste Manifest. Package all solvent/mastic waste created during the project in sufficient absorbent to eliminate all free liquids, and place in a D.O.T. 7A Type A approved steel drum (49 CFR 178.350). Label the drum as required, and transport to an approved Class 1 landfill with a separate Uniform Hazardous Waste Manifest and Waste Profile Documentation.

2. The Contractor SHALL NOT sign any Hazardous Waste Manifests for the Owner. It shall be the responsibility of the Contractor to notify the Owner's CAC and coordinate having any manifest properly signed by a Owner representative.

Part 23.6 - Carpet Removal over Vinyl Floor Tile (VFT)/Tile Adhesive Requirements

General Requirements

Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

The following requirements are for use when the only removal to be performed is of carpet applied over existing VFT or bare VFT mastic. If the intended removal includes the underlying materials and/or any associated base cove refer to and follow the requirements as set forth in Part 23.5 Vinyl Floor Tile (VFT) and Associated Adhesive Abatement Requirements.

For the purposes of this project any direction to remove carpet from over known or assumed asbestos containing VFT or bare VFT mastic where the carpet is found to be directly adhered to those surfaces by carpet glues or carpet mastic the following requirements shall apply. These requirements shall be enforced regardless of the amount of floor tile/mastic expected to be impacted by the removal process.

1. The Contractor shall provide all necessary notifications, equipment, tools, materials, lighting, labor, etc. to perform the work. Notification as appropriate to OSHA, EPA, or the delegated Air Quality Management District is the responsibility of the Contractor.

2. All HEPA equipment to be used on the project must be delivered to the site empty of any debris, clean, free of dust, and in full operating condition. HEPA equipment shall be DOP tested at the beginning of the set-up phase and prior to installation into the containment or use on the project. Any equipment removed from the site for more than 10 working days must be DOP tested again prior to re-use on the project.

3. DOP certification testing shall be observed and witnessed by an Owner's CAC. Copies of DOP test results and certification must be submitted to Owner's CAC within 24 hours of the testing being performed.
4. All poly sheeting to be used for the construction of enclosures/containments must be a fire rated material. SDS information reflecting this requirement must be submitted prior to use.

5. The Contractor shall be responsible for all clean-up and costs associated with the decontamination of occupied spaces adjacent to any containment where removal of ACM is conducted. The Contractor shall also be responsible for damage to building finishes and costs associated with removal of tape glue, staining of wall finishes, or destruction of wall surface integrity, unless the building is to be demolished. It is the responsibility of the Contractor to identify with the General Contractor all aspects of the project requirements pertaining to these types of damages.

6. Whenever vinyl floor tiles are to be removed, the base cove shall also be removed as part of the project. When the Contractor has passed the pre-start visual inspection, removal of base cove/boards

may be conducted. Base cove adhesive shall be removed completely on hard surfaced walls where damage to the substrate will not occur, or only to a point of smoothing out high spots on walls which will become damaged due to the work to be performed. Full removal is not expected unless the Contractor is notified in writing on these types of soft substrate surfaces.

7. To minimize damage to the existing paint above the base cove, the contractor shall use a utility knife to cut score the paint at the intersection of the base cove. This will allow removal of the base cove with minimal damage to the paint layer.

General Carpet Removal Instructions and Requirements

1. No personnel are allowed into the containment area during actual removal work without proper respiratory and personal protective equipment. At a minimum this shall include half-face negative pressure respirators with P-100 (HEPA) cartridges and full body coveralls.

2. All ventilation systems shall be locked-out and sealed with critical barriers of poly sheeting. Other penetrations such as doors, vents, etc. must also be sealed with either tape or poly sheeting as appropriate to secure the work area. A single stage cubicle unit of appropriate size for the work to be performed shall be placed on the entrance to the room. At a minimum this unit must be 3' X 3' X 6' in height. No spray glue may be used on any Owner property or building surface, unless the building is being demolished.

3. A remote clean-up and decontamination unit shall be put into place in a location considered to be central to the work being performed. This decontamination unit shall be equipped with a full shower unit, overflow pan, filtration unit, soap, warm and cold water, towels, etc. as required in other sections of this specifications. Decontamination procedures will be based on the actual amount of asbestos-containing materials impacted during the carpet removal. As a guide, if more than 100 square feet of VFT are impacted during carpet removal, the personnel performing the work shall shower at the end of each work period. If less than 100 square feet of VFT or VFT mastic are impacted during the process modified worker decontamination practices may be used.

4. A sufficient number of negative air units shall be installed which will provide a negative air pressure of at least -0.030" wp measured with a manometer.

5. When the Contractor has passed the pre-start visual inspection, removal of carpet may be conducted.

6. VFT adhered to the surface of the existing substrate will be removed from the carpet utilizing hand methods and hand tools as needed. These tiles shall be placed into waste containers for disposal. If all VFT has been removed from the carpet the carpet may be disposed as regular waste with no restrictions.

7. Any carpet removed from bare VFT mastic and the asbestos containing mastic remains adhered to the carpet will require the carpet be wrapped in two layers of polyethylene sheeting, properly labeled to meet Cal/OSHA requirements, and disposed as a non-hazardous asbestos containing waste in an appropriate landfill permitted to accept such asbestos waste.

<u>Part 23.7 - Sheetrock and Joint Compound Abatement Requirements</u>

General Requirements

Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

Removal of sheetrock and joint compound wall and ceiling system materials known to contain <1% asbestos as a composite material verified by the 400 Point Count method shall include the removal of all nails, screws, or other fastening units which have visible sheetrock and/or joint compound remaining, as well as, all dust, debris, and waste generated by the removal work.

Removal shall require a full enclosure/containment under negative pressure following all of the requirements in these specifications including a three stage worker decontamination unit.

Removal of less than 100 square feet of asbestos containing sheetrock and joint compound wall and/or ceiling system materials shall require a negative pressure enclosure, however, the use of a one stage decontamination unit without a shower will be permitted. All other containment requirements apply.

General Sheetrock and Joint Compound Wall and Ceiling Systems Removal Instructions and Requirements

1. No personnel are allowed into the containment area during actual removal work without proper respiratory and personal protective equipment. At a minimum this shall include half-face negative pressure respirators, full body coveralls, rubber boots, and gloves. No street clothes or shoes shall be worn inside containment during the removal process.

2. All doors, windows, and penetrations into the room(s) shall be sealed with poly sheeting. All ventilation systems shall be locked-out and sealed with critical barriers of either poly sheeting or plywood sheeting.

3. Full enclosure of the walls and ceiling with poly sheeting (as applicable) will be required, no matter what method of removal is used. Support of ceiling poly will be at the discretion of the Contractor. Ceiling may be constructed of one layer of 4 mil poly sheeting. Walls shall be constructed of one layer of 4 mil poly.

4. Based on the size of the enclosure/containment, a three stage decontamination unit shall be put into place and be fully operable.

5. A sufficient number of negative air units shall be installed which will provide a negative air pressure of at least -0.030" wp measured with a manometer.

6. Sufficiently wet sheetrock and joint compound wall and ceiling systems to be removed with amended water prior to and during the removal phase of work, and place into waste containers for disposal.

7. Upon completing the removal of all sheetrock and joint compound wall and ceiling systems, the Contractor shall conduct wet wiping on all remaining surfaces within the containment/enclosure.

<u>Disposal Requirements</u>

1. All sheetrock and joint compound wall and ceiling system waste that has been tested and found to contain <1% asbestos by the 400 Point Count method may be disposed as non-hazardous asbestos waste, in a landfill permitted to accept non-friable, non-hazardous asbestos containing material.

2. Waste material containers, including "burrito wrapped" material, shall have warning labels affixed. Contractor may either use the Cal/OSHA Title 8, 1529 (k)(8)(A-D) warning:

DANGER
CONTAINS ASBESTOS FIBERS

MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

3. All non-hazardous asbestos containing waste shall be tracked utilizing some form of system which at a minimum includes: date, document number, generator name and mailing address, description of the waste, waste generating site address, contractor company name and address, special handling instructions, transporter company name, as well as name and address of facility accepting the waste

4. Any drywall systems with skim coat or texture coat that contains >1% asbestos shall be handled, packaged and disposed as a friable hazardous asbestos waste.

Part 23.8 - Wood Floor & Associated Sublayers Removal Requirements

General Requirements

Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

The following requirements are for use when the only removal to be performed is of the wood gym flooring and associated sublayers. If the intended removal includes the underlying materials and/or any associated base cove refer to and follow the requirements as set forth in Part 23.5 Vinyl Floor Tile (VFT) and Associated Adhesive Abatement Requirements.

For the purposes of this project any direction to remove wood flooring from over known or assumed asbestos containing sublayers where the wood flooring is found to be directly adhered to those surfaces by glues or mastic the following requirements shall apply. These requirements shall be enforced regardless of the amount of wood flooring/mastic expected to be impacted by the removal process.

1. The Contractor shall provide all necessary notifications, equipment, tools, materials, lighting, labor, etc. to perform the work. Notification as appropriate to OSHA, EPA, or the delegated Air Quality Management District is the responsibility of the Contractor.

2. All HEPA equipment to be used on the project must be delivered to the site empty of any debris, clean, free of dust, and in full operating condition. HEPA equipment shall be DOP tested at the beginning of the set-up phase and prior to installation into the containment or use on the project. Any equipment removed from the site for more than 10 working days must be DOP tested again prior to re-use on the project.

3. DOP certification testing shall be observed and witnessed by an Owner's CAC. Copies of DOP test results and certification must be submitted to Owner's CAC within 24 hours of the testing being performed.

4. All poly sheeting to be used for the construction of enclosures/containments must be a fire rated material. SDS information reflecting this requirement must be submitted prior to use.

5. The Contractor shall be responsible for all clean-up and costs associated with the decontamination of occupied spaces adjacent to any containment where removal of ACM is conducted. The Contractor shall also be responsible for damage to building finishes and costs associated with removal of tape glue, staining of wall finishes, or destruction of wall surface integrity, unless the building is to be demolished. It is the responsibility of the Contractor to identify with the General Contractor all aspects

of the project requirements pertaining to these types of damages.

6. Whenever wood flooring is to be removed, the base cove shall also be removed as part of the project. When the Contractor has passed the pre-start visual inspection, removal of base cove/boards may be conducted. Base cove adhesive shall be removed completely on hard surfaced walls where damage to the substrate will not occur, or only to a point of smoothing out high spots on walls which will become damaged due to the work to be performed. Full removal is not expected unless the Contractor is notified in writing on these types of soft substrate surfaces.

7. To minimize damage to the existing paint above the base cove, the contractor shall use a utility knife to cut score the paint at the intersection of the base cove. This will allow removal of the base cove with minimal damage to the paint layer.

General Wood Flooring Removal Instructions and Requirements

1. No personnel are allowed into the containment area during actual removal work without proper respiratory and personal protective equipment. At a minimum this shall include half-face negative pressure respirators with P-100 (HEPA) cartridges and full body coveralls.

2. All ventilation systems shall be locked-out and sealed with critical barriers of poly sheeting. Other penetrations such as doors, vents, etc. must also be sealed with either tape or poly sheeting as appropriate to secure the work area. A single stage cubicle unit of appropriate size for the work to be performed shall be placed on the entrance to the room. At a minimum this unit must be 3' X 3' X 6' in height. No spray glue may be used on any Owner property or building surface, unless the building is being demolished.

3. A remote clean-up and decontamination unit shall be put into place in a location considered to be central to the work being performed. This decontamination unit shall be equipped with a full shower unit, overflow pan, filtration unit, soap, warm and cold water, towels, etc. as required in other sections of this specifications. Decontamination procedures will be based on the actual amount of asbestos-containing materials impacted during the carpet removal. As a guide, if more than 100 square feet of assumed asbestos containing sublayers are impacted during wood flooring removal, the personnel performing the work shall shower at the end of each work period. If less than 100 square feet of assumed asbestos containing sublayers are impacted during the process modified worker decontamination practices may be used.

4. A sufficient number of negative air units shall be installed which will provide a negative air pressure of at least -0.030" wp measured with a manometer.

5. When the Contractor has passed the pre-start visual inspection, removal of carpet may be conducted.

6. Assumed asbestos containing sublayers adhered to the surface of the existing substrate will be removed from the wood flooring utilizing hand methods and hand tools as needed. These sublayers shall be placed into waste containers for disposal. If all sublayers has been removed from the wood flooring the carpet may be disposed as regular waste with no restrictions.

7. Any wood flooring removed from bare flooring mastic and the assumed asbestos containing mastic remains adhered to the wood flooring will require the wood flooring to be wrapped in two layers of polyethylene sheeting, properly labeled to meet Cal/OSHA requirements, and disposed as a non-hazardous asbestos containing waste in an appropriate landfill permitted to accept such asbestos waste.

Part 23.9 - Impact to and Removal of Transite Pipe, Shingle, or Sheeting Materials

Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

Where transite pipe, shingles, or sheeting is to be impacted or removed the following procedures shall be performed:

1. All requirements of Cal/OSHA Section 1529 and US EPA AHERA regulations apply, and shall be followed, as well as, other applicable Federal, State, and local regulations as they pertain to training, work practices, air monitoring, waste disposal, etc.

2. Personal air monitoring shall be performed in accordance with Cal/OSHA Section 1529

3. Establishment of a work area restricting access to those personnel involved in the work, and posting of the work area is required.

4. An appropriately sized drop cloth of 6-10 mil poly sheeting sufficient in size to contain any debris generated during the removal shall be placed directly under the area to be worked to collect any fallen debris generated during the work.

5. Half-face and disposable coveralls shall be used during this work.

6. A HEPA vacuum must be in the immediate area ready for use.

7. Where the pipe must be cut the contractor may use any method applicable to performing the work. Any use of hand or mechanical saws, or other method which will produce dust and will require the use of the HEPA vacuum and engineering controls which will collect any and all dust generated during the sawing process.

8. The Contractor shall apply a sufficient amount of amended water to all pipe surfaces to be impacted during the work to keep them adequately wet.

9. All of the Contractor's materials, including poly sheeting, tools, etc. shall be properly decontaminated of visible dust and pipe debris utilizing wet cleaning methods and HEPA vacuuming prior to being removed at the completion of the work performed. Disposable materials must be properly disposed.

10. Intact transite waste generated may be disposed as non-friable non-hazardous asbestos waste, in a landfill permitted to accept non-friable, non-hazardous asbestos material. If the transite material is currently friable, or becomes friable during its removal, it shall be disposed of in a landfill permitted to accept friable hazardous asbestos waste.

    It is acceptable to dispose of non-friable transite waste after placing it into two 6 mil thick polyethylene bags properly sealed and marked to meet current OSHA requirements.

11. The Contractor is required to provide to Owner's Agent a copy of the "trip ticket" indicating the actual weight of waste material and the landfill accepting the waste.

Part 23.10- Demolition with Selected Asbestos Containing Materials Left in Place

Not Applicable

Part 23.11 - Contaminated Attic Space Procedures

Not Applicable

Part 23.12 - Non-Friable, Non-Hazardous, Glazing Abatement Requirements

Not Applicable

Part 23.13 - Subfloor Crawl Space Dirt Removal Requirements

Not Applicable

Part 23.14 - Subfloor Enclosure Requirements

Not Applicable

Part 23.15 - Installation of "Rat Slab" in Sublfoor Crawl Space Requirements

Not Applicable

Part 23.16 - Stucco/Texture/Plaster Removal and Containment Requirements

General Requirements

Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

Stucco/texture surfacing materials regardless of asbestos content from interior or exterior building components shall be removed by either by hand or by other mechanical methods within a negative pressure enclosure with a manometer and following all requirements in these specifications including a three stage worker decontamination unit.

1. Rigid scaffolding or framing shall be constructed on the exterior of buildings where a negative pressure enclosure is required. All plastic sheeting shall be secured to the scaffold or framing in a manner sufficient to maintain structural integrity of the enclosure at all times.

2. Removal of stucco/texture regardless of asbestos content over a surface area greater than 10 square feet will require the construction and use of a three stage decontamination unit. This decontamination unit must be directly attached to the entrance of the containment enclosure and fully operable with working shower and hot water heater, as well as properly stocked with towels, soap, and shampoo.

3. Sufficient negative air units shall be installed which will provide a minimum of 4 air changes per hour and -0.030" air pressure differential measured with an attached manometer.

4. Fencing or other physical barriers shall be positioned in order to prevent access to exterior containment enclosures by any non-asbestos trained personnel.

5. Upon completing removal of all stucco/texture, the Contractor shall conduct wet wiping of all remaining wall surfaces, poly barriers, scaffolding, etc. to remove settled dust from those surfaces.

Final Lockdown-Encapsulation

1. Lock down-encapsulation of the containment shall be performed using one of two methods based on the needs of the project.

    A. **Hand Wipe Method:** The needs of the project may require the remaining building component surfaces have no new film materials applied to them. If this is required the asbestos

abatement contractor shall use clean wet cloths/towels to wipe existing surface dust off of remaining building components. These cloths/towels will be wetted with clean water and no chemicals or treatments will be added. All poly sheeting scaffolding and other components used to create the containment will be hand wiped with wetted cloths/towels which are treated with lock down-encapsulation chemicals to remove possible surface dust and lock down-encapsulate the surfaces of these items. This method can be used prior to the final visual to complete the final cleaning process.

B. **Air-less Spray Method**: The asbestos contractor shall lock down-encapsulate the entire containment area upon completion of the final visual inspection by the Owner's CAC, and acceptance of the work as complete.

Disposal Requirements

1. All waste containing less than 1% asbestos shall be properly disposed as a non-hazardous asbestos containing waste at an appropriate landfill. All waste containing greater than 1% asbestos shall be properly disposed as hazardous asbestos waste, in a landfill permitted to accept friable, hazardous ACM.

2. All waste containers shall have labeling in accordance with OSHA, DOT, EPA and DTSC requirements. All "Hazardous Waste" shall also include a Waste manifest with the generator's name, address, and Manifest Document number.

Part 23.17 - Fireproofing and Cementitious Texture Plaster Abatement Requirements

General Requirements

Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

All fireproofing and cementitious texture plaster material regardless of amount shall be removed in a negative pressure enclosure/containment. The enclosure shall include critical barriers, two layers of plastic on walls if the walls are not being removed, a sufficient number of DOP tested negative air units to attain a level of at least -0.030" of negative air pressure within the containment, a digital recording manometer with a minimum of displaying three digits after the zero (0.000). At a minimum, a three-stage decontamination unit with an operational shower and water filtration system.

1. Removal of fireproofing/cementitious texture plaster by multiple methods and techniques shall be performed by personnel who are trained and accredited to perform Class I work.
2. Water blasting of fireproofing is not allowed.

3. No personnel are allowed into the containment area during actual removal work without proper respiratory and personal protective equipment. At a minimum this shall include full-face powered air purifying respirators, and full body coveralls.

4. All doors, windows, and penetrations into the room(s) shall be sealed with poly sheeting. All ventilation systems shall be locked-out and sealed with critical barriers of either poly sheeting or plywood sheeting.

5. Full enclosure of the walls and ceiling with poly sheeting (as applicable) will be required, no matter what method of removal is used. Support of ceiling poly will be at the discretion of the Contractor. Ceiling may be constructed of one layer of 4 mil poly sheeting. Walls shall be constructed of two layers of 4 mil poly.

6. A three stage decontamination unit is required and shall be comprised of zippered doors between the chambers. Flapped doors will not be acceptable. The decontamination unit shall be cleaned daily of all debris, bags, tape, towels, etc. and shall remain clean during the day..

7. Since all asbestos workers will be required to shower upon leaving the work area, all workers shall wear a bathing suit under the full body coverall. The shower shall have hot and cold water, shampoo, soap and clean dry towels for drying. **No street clothes or shoes shall be worn inside containment by the asbestos contractor employees during the removal process**. The contractor cannot wear leather work boots in the shower, so steel toed rubber boots are required to be worn. Rubber boots shall be left in the equipment room before entering the shower and they can be washed at the end of the work day and placed inside of asbestos waste bag, taped closed and removed.

8. Sufficient negative air units shall be installed which will provide a minimum of 4 air changes per hour and a minimum of -0.030" air pressure differential, while the zippered doors are opened for bag-out of waste. A digital manometer recording shall be made of all days when in use. The manometer tapes shall reflect the location, times, and dates of all measurements recorded.

9. When the Contractor has passed the pre-start visual inspection by the asbestos consultant, removal of fireproofing may be conducted.

10. Sufficiently wet fireproofing to be removed with amended water prior to and during the removal phase of work, and place into waste containers for disposal.

11. No fireproofing/cementitious texture plaster shall be allowed to remain on the floor of the containment at the end of each work shift. All fireproofing removed on a shift shall be placed in waste containers. During asbestos removal, all floors of the containment shall remain wet by frequent wetting with amended water. At no time shall the floor of the containment be dry.

12. The contractor shall clean all surfaces of the substrate using whatever tools to effectively clean and remove the material. On metal fluted decks where fireproofing/cementitious texture plaster material is removed, all fluted openings shall be cleaned of debris using small tools rags, brushes, etc. as necessary to reach the remove the material. Upon completing the removal of all fireproofing/cementitious texture plaster, the Contractor shall conduct wet wiping on all remaining surfaces within the containment/enclosure. Use of an airless spray to detail clean the fluted openings is an acceptable cleaning technique.

Disposal Requirements

1. All fireproofing/cementitious texture plaster waste shall be disposed as friable hazardous asbestos waste at a landfill permitted to accept friable, hazardous asbestos containing material.

SECTION 24. ASBESTOS SPECIFICATIONS/PROCEDURES

Part 24.1 - Contacts

Jose Hernandez, Entek Consulting Group, Inc. 916-632-6800

Part 24.2 - Removal Locations

Refer to architectural drawings for this site identifying the buildings and work included in the project and scope of work outline. The General Contractor and his Sub-contractor are responsible for estimating the amount of asbestos-containing materials to be disturbed or removed as revealed on the mandatory bid walk, and provided in the project specifications and architectural drawings. The drawings will also provide the Contractor

with locations where work is to be performed to allow computation of the quantities of materials to be impacted or removed.

The asbestos contractor shall provide a complete copy of this specification to their onsite competent person for reference while conducts work on the project. A copy of these specifications shall remain onsite by the asbestos contractor for the duration of the project.

Part 24.3 - Materials to be Abated

Refer to the architectural drawings and project specifications for designations and instructions pertaining to what materials are to be removed or impacted during this project. Directions pertaining to materials to be impacted or removed during this project are **NOT** included in this Exhibit. This exhibit includes work practices and procedures for those materials that are impacted by the planned renovation/demolition.

Areas of roofs, walls, floors, and/or ceilings may require penetrations be made during the project which may involve asbestos containing materials (ACM) depending upon the location of penetrations. Prior to impacting any building materials which are listed as “suspect” for containing asbestos by the US EPA the Contractor should refer to Section 25, Asbestos Results List for information pertaining to specific Asbestos Containing Materials (ACM) or products known to exist on the site. Materials suspected of containing asbestos but which have not been tested are “assumed” to contain asbestos.

A hazardous materials inspection was conducted by Entek Consulting Group, Inc. for the Leonardo Da Vinci TK-8 School, in preparation of the gym flooring renovation project. The contractor shall refer to the Hazardous Materials Survey report prepared on May 5, 2026, which includes all suspect building materials that were sampled and analyzed for asbestos and included an assessment for lead in paint and ceramic products. The report also includes discussion on Freon, PCB in ballasts, and fluorescent light tubes.

Materials commonly excluded from being suspected for containing asbestos include but are not limited to: unwrapped pink and yellow fiberglass insulating materials or products, foam insulation, wood, metal, plastic, or glass. All other types of building materials or coatings on the materials listed above are commonly listed as “suspect” and must be tested prior to impact by a Contractor.

Attic spaces at this site may already be contaminated with asbestos roofing debris from prior roofing replacement projects, but is unknown. If ceiling systems are removed and it is discovered that suspect roofing debris is present, the contractor shall stop work and bring it to the attention of the project manager to assess the potential for asbestos.

Part 24.4 - Containment and Abatement Requirements

The general guidelines in these specifications shall be followed by the asbestos abatement contractor for all work on this project. All requirements of Cal/OSHA Section 1529 and US EPA AHERA regulations apply, and shall be followed, as well as, other applicable regulations.

The Contractor shall follow all requirements set forth in Section 23, Specific Procedures and Requirements when disturbing or removing specific asbestos containing materials.

All asbestos related work shall be performed within negative pressure work enclosures for any class of asbestos work. The term “containment” or “enclosure” shall be construed to mean a containment which is constructed to enclose a work area (as defined in Section 2), and meet all applicable requirements set forth in Sections 2 through 22 of this Specification and all governing regulatory agency requirements. Each containment shall be tailored to meet the needs of the “work area” to be enclosed and include all requirements as set forth in the above related sections and government regulations applicable to asbestos related work.

Sufficient negative air units shall be installed which will provide a minimum of 4 air changes per hour and a minimum of -0.030" air pressure differential, while the zippered doors are opened for bag-out of waste. A digital manometer recording shall be made of all days when in use. The digital recording manometer shall have at a minimum the ability of displaying three digits after the zero (0.000). The manometer tapes shall reflect the correct location, times, and dates of all measurements recorded. Once these requirements have been met and the negative pressure has been established, the Contractor shall request a pre-start visual inspection from Owner's asbestos consultant.

A three stage decontamination unit is required and shall be comprised of zippered doors between the chambers. Flapped doors will not be acceptable. The decontamination unit shall be cleaned daily of all debris, bags, tape, towels, etc. and shall remain clean during the day. The clean room of any three stage decontamination unit shall be at least 5' in width, 5' in length, and 7' in height. Multiple showers are required if the number of asbestos workers exceeds ten per Title 8 3366 Washing Facilities. When there are less than five employees, the same shower may be used by both sexes if the shower room can be locked from the inside.

Part 24.5 - Contractor Assist Requirements

The asbestos contractor shall provide "contractor assist" services for electrical, plumbing, mechanical, and other trades as necessary and agreed to with the General Contractor, for work to be conducted in spaces such as attics, wall cavities, and mechanical rooms where asbestos contamination is present, or where ACM are to be disturbed in order to perform the work.

Contractor assist work shall require the asbestos contractor to construct a mini-cube enclosure, create access to the contaminated area, and wet wipe or HEPA vacuum all dust and debris from the immediate work area as needed to create a "clean" environment for the trade workers to work. All procedures specified in Section 23 shall be followed.

Part 24.6 - Worker Protection

At a minimum half-face respirators with P-100 (HEPA) cartridges, disposable coveralls, and hard sole shoes shall be used during the removal and disposal of all asbestos containing material. Full-face powered air purifying respirators (PAPR) with P-100 cartridges are required for all Class I work. Workers wearing tennis shoes, sandals, or soft sole type shoes will not be allowed to work on roofs or inside containments regardless of the activity being performed. Worker protection for all other work areas shall be in compliance with Cal/OSHA requirements and shall follow the respirator selection as specified in Title 8 section 5144.

Part 24.7 - Electrical and Water Hook-Ups

The Owner shall provide access for electrical and water hook-ups. The Contractor shall install a temporary electrical spider box to an existing electrical panel using a licensed qualified electrical contractor. The Contractor is responsible for all hook-ups, electrical cords, water hoses, and hose bibs necessary for attachment.

Part 24.8 - Visual and Air Clearance Criteria

The Contractor shall perform a pre-final visual of the removal area and adjacent surfaces prior to requesting that Owner's asbestos consultant (CAC) conduct a final visual inspection. The pre-final visual performed by the Contractor shall verify that all materials have been completely removed from the work area, and that the work area meets the requirements specified in Section 17.

Upon completion of the pre-final visual inspection by the Contractor, a final visual of the containment area will be performed by Owner's asbestos consultant. The Contractor shall not be allowed to encapsulate the containment until receiving acceptance by Owner's asbestos consultant confirming the removal area and the containment have met the criteria of Owner's asbestos consultant for completeness of removal of asbestos materials and cleanliness of the containment barriers and surfaces.

Clearance air sampling will be performed following passing the visual inspection, encapsulation of the containment has taken place and a sufficient amount of time has passed to allow the encapsulant to dry. All clearance air samples will be analyzed by transmission electron microscopy (TEM), and performed by a NIST/NVLAP accredited laboratory. The clearance criteria for releasing the Contractor is the AHERA Standard, with the average of all air samples less than 70 asbestos structures per square millimeter. Aggressive air sampling will be used, which includes using a leaf blower in conjunction with fans to dislodge any remaining dust within the containment.

Part 24.9 - Owner's Responsibility

Not Used

Part 24.10 - Disposal Requirements

Disposal of all friable hazardous asbestos containing waste must be tracked utilizing a current copy of a Uniform Hazardous Waste form. These forms are to be properly filled out by the Contractor and signed by an authorized Owner's representative. All non-friable non-hazardous asbestos waste shall be tracked using a Bill of Lading or equivalent and signed by an authorized Owner's representative. No individual or representative other than the Owner's designated representative is permitted to sign Uniform Hazardous Waste forms or bill of Lading or equivalent for the Owner.

It shall be the responsibility of the Contractor to notify Owner's CAC and coordinate having a hazardous waste manifest properly signed by a Owner representative.

Part 24.11 - Work Periods

Work periods shall be scheduled with Owner's CAC at least 48 hours prior to the start of any shift. If weekend work is to be conducted, shift times are to be established and approved by Owner's CAC. All shifts are to consist of 8 hours and will begin at the time specified and agreed to by Owner's CAC and the abatement contractor.

PREPARED BY:

Jose Hernandez
Project Manager
Entek Consulting Group, Inc.
CAC#22-6995
May 5, 2026

Part 24.12 - Pre-Construction Submittal List

1. _____ Copy of State of California - Contractor's State License

2. _____ Copy of State of California CSLB Active License

3. _____ Copy of State of California CSLB Asbestos Certification

4. _____ Copy of Department of Industrial Relations; Division of Occupational Safety and Health; Certificate of Registration for Asbestos-related Work

5. _____ Copy of signed statement from company officer listing citations and pending proceedings against the Contractor, or if there have been no citations, a copy of the statement that no actions by regulatory agencies have occurred in the last three years signed by an officer of the company.

6. _____ General Liability Insurance Certificate

   a) ___ Occurrence
   b) ___ Asbestos/Lead Activities or Abatement Certificate
   c) ___ Owner Named as Additional Insured
   d) ___ Consultant Named as Additional Insured

7. _____ Auto Insurance

8. _____ Workers' Compensation Insurance

9. _____ Statement of Non-use of Sub-contractors or

   a) ___ Name of Each Sub-contractor
   b) ___ License Number for Each Sub-contractor
   c) ___ General Liability Insurance Certificate for Each Sub-contractor

      1) ___ Minimum Coverage of $1,000,000.00
      2) ___ Owner Named as Additional Insured
      3) ___ Consultant Named as Additional Insured

   d) ___ Auto Insurance Certificate for Each Sub-contractor
   e) ___ Workers' Compensation Insurance Certificate for Each Sub-contractor

      1) ___ Owner Named as Additional Insured
      2) ___ Consultant Named as Additional Insured

10. _____ Written Notification to CAL/OSHA

11. _____ Written Notification to SMAQMD, EPA NESHAP Region IX

12. _____ Copies of City Permits (e.g. Parking or Waste container) or Statement That no Permits are Required

13. _____ Statement That no Equipment Will be Rented for use With Asbestos or a Statement From Each Rental Company Acknowledging Their Equipment Will be Exposed to Asbestos

14. _____ Non-Emergency Telephone Numbers

    a) ___ Local Police Department
    b) ___ Sheriff Department
    c) ___ Fire Department
    d) ___ Emergency Medical Facility and Directions to That Facility From the Site

15. _____ Written Emergency Plans

16. _____ Written Work Plan

17. _____ Written Schedule

18. _____ Worker Documentation (Must Include at Least One Supervisor)

    a) ___ Training Records for Asbestos - AHERA (Supervisor and Worker)*
    b) ___ Medical Examination Written Opinion Final Report for Each Employee*
    c) ___ Respiratory Fit Tests for Each Employee*

19. _____ Equipment list, SDS for all materials to be used on the project, including but not limited to, spray glue, encapsulants, wetting agents, mastic remover, etc.

20. _____ Name of laboratory/person used for PCM analysis and copy of current NVLAP Certificate of Accreditation (if applicable), and most recent AIHA Proficiency Analytical Testing (PAT) Program results.

21. _____ Written Statement That OSHA Monitoring Will be Performed During the Project

22. _____ Manufacturers documentation of 5.0 micron filter capability required for waste water

23. _____ Name of Transporter

24. _____ Hazardous Waste Transporter Registration (if applicable) **Is required only if work to be conducted involves the removal and disposal of "hazardous" asbestos waste as determined either by definition or designated within the Asbestos Abatement Specifications/Procedures and associated attached Exhibits.**

25. _____ Waste Facility Documentation

    a) ___ Name and Site Address
    b) ___ EPA Identification Number (if applicable)
    c) ___ Copy of Current Permit Authorizing Asbestos Waste Receipt and Disposal

26. _____ Signed Copy of Competent Person Form Acknowledging Reading and Understanding the Specifications (Last Page of Forms Sections of Document) This must be signed by the asbestos Contractor/Supervisor who will onsite, not in the contractor's office.

Note: Items 9, 12, 13, and 21 may be addressed in a single letter as applicable.

* No Contractor's worker will be allowed to conduct asbestos related work, enter a containment, or regulated area prior to verification of AHERA, respirator, and medical

documentation. This verification must either be onsite or faxed to Owner's CAC prior to entry.

Part 24.13 - Interim Construction Submittals

Upon request by the Owner or Owner's Representative, the Contractor shall provide copies of documentation identified to be pertinent to the project.

Part 24.14 - Post Construction Submittal List

Contractor shall provide the following post-construction submittals to Owner's Representative within thirty (30) days of the completion of asbestos abatement work.

1. _____ Copies of revised notifications to regulatory agencies.

2. _____ Information on all new workers not covered by the pre-construction submittals and not submitted during the project.

3. _____ A copy of worker exposure monitoring results collected in compliance with DOSH regulations (Title 8 CCR, Section 1529) including daily/representative/full-shift/breathing-zone air samples, and 30-minute excursion samples.

4. _____ A copy of the worker/visitor log showing the following for all persons entering the work area: date, name, social security number, entering, and leaving times, company or agency represented, and reason for entry. The Contractor's time records will not be accepted in lieu of a worker/visitor log.

5. _____ Copies of all accident reports submitted during the course of work. **If no accidents occur during the project this should be stated in writing by the Contractor.**

6. _____ Receipts from the landfill operator acknowledging the Contractor's delivery of wastes, including dates, container types and quantities, tare weights or material delivered, and all appropriate signatures.

7. _____ A complete record of the air filtration devices used certifying DOP testing (if performed) and a circular chart recording, indicating continuous operation and documenting differential air pressure.

8. _____ Copies of DOP Testing Performed on HEPA Equipment not Previously Submitted

9. _____ Manometer graphs identifying project name, date, and location.

10. _____ A copy of the asbestos waste record showing dates, times, manifest numbers, quantities of wastes, types of containers removed from the work area, the hauler, and the signature of the recorder.

11. _____ A Land Disposal Restrictions Notification and Certification

12. _____ Completed Uniform Hazardous Waste forms

13. _____ Other Documents as Requested

SECTION 25. ASBESTOS RESULTS LIST

Any material not specified on the following list which the Contractor encounters at this site must be considered as "suspect" and "assumed" to contain asbestos per US EPA. The only items excluded from this statement are; bare wood, glass, and metal.

Suspect Materials Found or Assumed TO Contain Asbestos Leonardo Da Vinci K-8 School - Gym Floor Project					
Sample ID#'s	**Suspect Material**	**Asbestos Content/Type (%) by PLM**	**Location**	**NESHAP/ Cal/OSHA Classification**	**Total Estimated Quantity**
n/a	All suspect materials below the wood gym floors (sublayers)	ASSUMED >1% Asbestos	Throughout Gym	CAT-II	Approximately 6,600 Sq. Ft.
The flooring was sampled by a district representative, therefore all documentation regarding the sampling will need to be provided by the district. Since no samples were collected by Entek the flooring materials must be assumed to contain asbestos greater than 1%.					

Note 1.: **Category I Non-friable ACM** is asbestos-containing packing, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent asbestos by area.

Note 2.: **Category II Non-friable ACM** is any material, excluding Category I non-friable ACM, containing more than one percent asbestos, which is non-friable such as transite and other concrete based products.

Note 3.: **Regulated Asbestos-Containing Material (RACM)** is any friable material, any Category I non-friable ACM which has become friable, any Category I non-friable ACM which will be or has been subjected to sanding, grinding, cutting, or abrading, any Class II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to a powder by the forces expected to act on the material in the course of demolition or renovation operations.

Note 4.: **Asbestos Containing Construction Materials (ACCM)** is a manufactured construction material containing greater than 0.1% asbestos by weight by the PLM method.

Note 5.: The terms "assume" and "presume" mean the named material is considered positive for containing asbestos and must be treated accordingly, until properly sampled in compliance with 40 CFR, Part 763 Asbestos-Containing Materials in Schools; Final Rule and Notice.

SECTION 26. SITE MAP

SECTION 27. FORMS

Competent Person Acknowledgement

The Cal/OSHA standard for asbestos related construction work, found in 8 CCR, 1529, outlines specific duties and qualifications of the "Competent Person." Find below a overview of these qualifications and responsibilities. The competent person must be authorized by their employer to take prompt corrective measures to eliminate hazards on the job and protect their workers safety. The competent person must be the Supervisor onsite who is capable of:

- Identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees.
- Identifying existing asbestos hazards in the work place and selecting the appropriate control strategy for asbestos exposure.

The duties of the competent persons include, but are not limited to:

- Frequent and regular inspections of the job site, materials, and equipment.
- Supervise or perform the set-up of the regulated area and/or containment.
- Ensure the integrity of the regulated area and/or containment.
- Set up procedures to control entry to and exit from the regulated area and/or containment.
- Supervise all employee exposure monitoring and assure it is conducted according to regulatory requirements.
- Ensure that employees working within the regulated area(s) wear respirators and protective clothing as required by regulation.
- Ensure that employees working set up, use, and remove engineering controls, use work practices and personal protective equipment in compliance with the regulations.
- Ensure that employees use hygiene facilities and observe the decontamination procedures specified in the regulation.
- Ensure through continuing onsite surveillance that engineering controls are functioning properly and employees are using proper work practices.
- Ensure that notification requirements of the regulation are met.

Additionally, the EPA requires the competent person to be trained in the Federal NESHAP regulations, the means to comply with them, and be on site during all removal operations.

I _____ have the authority to take prompt corrective measures to eliminate hazards on the job and protect workers safety. Furthermore, I have read and understand my duties as outlined above and under the applicable regulations, and will exercise them to best of my ability.

_____ Date: _____ Employer: _____
Signature of Competent Person Who Will Be Onsite

_____
Printed Name of Competent Person Who Will Be Onsite

ENTEK
CONSULTING GROUP, INC.
3435 American River Drive, Suite C, Sacramento CA 95864 Phone (916) 632-6800 www.entekgroup.com

May 5, 2026

Mr. Chris Ralston
Assistant Superintendent
Facilities Support Services
Sacramento City Unified School District (SCUSD)
425 1st Avenue
Sacramento, CA 95818

Re: Pre-renovation Hazardous Materials Survey Report – SCUSD – Gym Building at Umoja International Academy located at 5301 N Street in Sacramento, CA 95819

Dear Mr. Ralston,

Entek Consulting Group, Inc. (Entek) is pleased to provide SCUSD with this Pre-renovation Hazardous Materials Survey Report regarding the bulk asbestos and lead samples collected from the Gym Building at Umoja International Academy. Mr. Eric McMullen, Project Engineer II with Kitchell CM on behalf of SCUSD requested Entek, to conduct a pre-renovation hazardous materials survey of the Gym Building located within the Umoja International Academy campus in preparation for renovation activities. It is Entek's understanding that the gym flooring, wooden wall panels, and door frames inside the Main Gym within the Gym building are planned for renovation. All other interior/exterior areas of the Gym Building were not included in this survey.

On March 26, 2026, Mr. Jose Hernandez conducted the pre-renovation hazardous materials survey. Mr. Hernandez is a Cal/OSHA Certified Asbestos Consultant (CAC) and State of California Department of Public Health (CDPH) certified Lead Inspector/Assessor.

Asbestos Bulk Sampling and Results

The samples of materials suspected of containing asbestos were submitted to Eurofins Built Environment West, LLC (Eurofins), a laboratory located in Folsom, California. These samples were subsequently analyzed by polarized light microscopy (PLM) with dispersion staining. Eurofins is accredited by the National Voluntary Accreditation Program (NVLAP) for this analysis.

The US EPA NESHAP and SMAQMD uses the terms Regulated Asbestos Containing Material (RACM), Category I, and Category II when identifying materials which contain asbestos in amounts greater than 1%. Cal/OSHA uses the term ACCM which indicates a manufactured construction material contains greater than 0.1% asbestos by weight by the PLM method. This definition can be found in Title 8, 1529.

Entek collected two (2) bulk samples of the suspect materials from the Gym Building that are expected to be impacted during the renovation project. Some of those samples contained multiple layers which were individually analyzed to determine their asbestos content. Analysis of all samples collected was by PLM with dispersion staining. Results of the analysis are listed in the following tables:

Suspect Materials Found NOT TO Contain Asbestos				
Sample ID#'s	**Suspect Material**	**EPA AHERA Classification**	**Asbestos Content**	**Location**
01A-B	Black Angled Vinyl Base Cove with Yellow Mastic	Miscellaneous Material	None Detected	Throughout wall base inside the Main Gym

Suspect Materials Found or Known TO Contain >1% Asbestos (CAT-II)				
Sample ID#'s	**Suspect Material**	**Asbestos Content/Type (%) by PLM**	**Location**	**Total Estimated Quantity**
*n/a	All suspect materials below the wood gym floors (sublayers)	ASSUMED >1% Asbestos	Throughout Gym	Approximately 6,600 Sq. Ft.
n/a	Gray-Brown Carpet with Associated Mastic	ASSUMED >1% Asbestos	At Entryways of Gym Where Found	Approximately 100 Sq. Ft.
n/a	Foam Padding with Associated Mastic	ASSUMED >1% Asbestos	Assumed to be Found Under Existing Flooring Throughout Gym	Approximately 6,600 Sq. Ft.

*The gym flooring was not sampled at the request of Eric McMullen with Kitchell and therefore shall be assumed to contain asbestos greater than 1% until analyzed by an accredited laboratory and proven otherwise. Entek recommends that we return to sample the flooring materials during the initial phase of the project but prior to complete removal of the flooring materials.

NOTE: Any CAT-I or CAT-II materials identified in the previous tables which will be subjected to mechanical removal, must be considered RACM for the purposes of notification to SMAQMD and classification of waste. Removal of any CAT-I or CAT-II materials prior to demolition of a building depends upon how the materials will be impacted and if the impact will cause the materials to become friable. If any remaining CAT-I or CAT-II materials become friable they must be removed prior to the initiation of demolition.

NOTE: Cal/OSHA regulates all materials containing greater than 0.1% asbestos. As a result, impact to materials identified as ACCM and ACM must be performed by properly asbestos trained personnel utilizing appropriate personal protection, work practices, as well as properly constructed and demarcated work areas or containments, in accordance with Cal/OSHA asbestos regulations.

All sample numbers noted in the tables above start with ECG-26-8135-

US EPA AHERA uses three terms when determining the classification of a material for the purpose of sampling. These terms include miscellaneous, surfacing, and thermal system insulation (TSI).

Miscellaneous materials are building materials on structural components, structural members, or fixtures, such as floor and ceiling tiles, and do not include surfacing material or TSI.

Surfacing materials are materials that are sprayed-on, troweled-on, or otherwise applied to surfaces, such as acoustical plaster on ceiling and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes.

TSI is material applied to pipes, fittings, boilers, breeching, tanks, ducts, or other structural components to prevent heat loss or gain, water condensation, or for other purposes.

The information provided in the table of this report are for use by the Owner in determining where asbestos containing materials are located, and whether any future work may impact those materials. The information is also provided for use by any contractor who may perform work in areas impacting the materials listed in this report, and for use as appropriate by asbestos abatement contractors to provide costs related to work impacting ACM.

Any building materials which are considered “suspect” for containing asbestos which have not been identified in this report must be assumed to contain asbestos in amounts >1% until properly investigated and/or tested.

Materials commonly excluded from being suspected for containing asbestos but are not limited to: unwrapped pink and yellow fiberglass insulating materials or products, foam insulation, wood, metal, plastic, or glass. All other types of building materials or coatings on the materials listed above are commonly listed as “suspect” and must be tested prior to impact by a Contractor. Work impacting these untested or newly discovered materials must cease until an investigation can be completed.

US EPA

The property included in this survey report is in Sacramento County. The Sacramento Metropolitan Air Quality Management District (SMAQMD) has been given authority for enforcement of the NESHAP regulations by means of their own rules (Rule 902).

A demolition is the wrecking, taking out, or burning of any load supporting structural member. A renovation is everything else. 10-day written notification to the US EPA Region IX and the SMAQMD is required prior to the performance of any demolition project regardless of asbestos being present or not. This notification would also apply to any renovation project which involves the wrecking, taking out, or burning of any load bearing structural member during a renovation as well.

There is a sufficient amount of ACM present to require a 10-day notification to the SMAQMD be submitted prior to starting work which will impact materials identified as RACM or CAT-I and CAT-II materials if they are made friable. If more than 160 square feet, 260 linear feet or 35 cubic feet of RACM is planned for removal on the project, formal written notification to SMAQMD is required.

Cal/OSHA

Disturbance of any ACM or ACCM could generate airborne asbestos fibers and would be regulated by Cal/OSHA. Cal/OSHA worker health and safety regulations apply during any disturbance of ACM or ACCM by a person while in the employ of another. This is true regardless of friability or quantity disturbed. Since it has been estimated that more than 100 square feet of ACCM does exist and will be impacted during the upcoming project, a licensed asbestos contractor registered with Cal/OSHA is required to perform the asbestos related removal work. Entek recommends a licensed asbestos contractor be used to remove ACCM even if less than 100 square feet of ACCM is being disturbed.

For compliance with Title 8, Section 341.9, the asbestos contractor must send written notice at least one day (24 hours) prior to start of any work which will impact any amount of asbestos to the local office for the State of California, Department of Occupational Safety and Health, and perform all work in accordance with Cal/OSHA requirements.

Lead Inspection, Sampling, & Results

A total of three (3) bulk samples were collected from the painted surfaces that had inconclusive XRF results and are expected to be impacted in the upcoming renovation project. The samples were collected and submitted to Eurofins Built Environment West, LLC (Eurofins) located in Tustin, California. The bulk samples were analyzed utilizing the NIOSH 7082 method (including the EPA 7000B and EPA 7420 methods) utilizing flame atomic absorption spectroscopy. Eurofins is accredited by the Environmental Laboratory Accreditation Program (ELAP) to perform the analysis. Results of the XRF analyzer and lab analysis are listed in the following tables and further details are in Appendix B.

Paints/Coatings/ Materials Determined to be Lead Containing Paint (LCP)		
Paint/Coating Color or Material	**Lead Content (ppm)**	**Component/Location**
Blue Paint	34	Interior Metal Door Frames and Doors / Throughout Gym Building Where Found

LCP - Materials/coatings/paints which contain measurable amounts of lead. The disturbance of these materials/coatings/paints is regulated by Cal/OSHA.

Paints Determined NOT TO Contain Lead (<41, 42, and 67 ppm)	
Paint Color	**Building Component**
Varnish	Interior Wood Floor / Throughout Gym Flooring
Black Paint	Interior Wood Floor Trim / Throughout Perimeter Edge of Gym Flooring
Varnish	Interior Wood Wall Panels / Throughout Gym Walls

Paints determined “NOT TO” contain lead for the purposes of this report are those samples which when analyzed did not indicate lead to be present at or above the reporting limits. The limits of detection were 41, 42, and 67 parts per million (ppm). As a result, any paints shown “NOT TO” contain lead will not require any special training or work practices related to lead when impacted.

Lead Regulatory Compliance

Any upcoming project which may result in the disturbance of lead containing products or surfaces but is not intended to remediate a lead hazard or specifically designed to remove LBP to reduce or eliminate a known hazard, would be considered “lead related construction work.”

Lead related construction work does not fit the classification of a “lead abatement project” under CDPH Title 17 regulations. “*Abatement*” is defined in Title 17, Division 1, Chapter 8, Article 1 as “any set of measures designed to reduce or eliminate lead hazards or LBP for public and residential buildings but does not include containment or cleaning.” A *lead hazard* is defined in Title 17, Division 1, Chapter 8, Article 1 as “deteriorated LBP, lead contaminated dust, lead contaminated soil, disturbing LBP or presumed LBP without containment, or any other nuisance which may result in persistent and quantifiable lead exposure.”

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." (Title 17, California Code of Regulations, Division 1, Chapter 8, Article 1).

Currently, Cal/OSHA has not established a definition for LBP, nor have they established minimum concentrations where their regulations do not apply. Cal/OSHA regulates all construction activities involving materials containing lead, including LBP. These regulations are found in CCR, Title 8 Section 1532.1 (§1532.1) Lead in Construction.

Cal/OSHA has not established a concentration of lead in a product where their regulations do not apply, therefore, any disturbance to products containing lead comes under the jurisdiction of Cal/OSHA and their regulations. Disturbance of paints/coatings or materials determined to be LBP may trigger a pre-work notification to Cal/OSHA if "trigger tasks" disturb 100 square feet or more of those paints/coatings or materials. Trigger tasks are described in Title 8 CCR 1532.1.

Limitations

This pre-renovation hazardous materials survey is limited to the flooring and wall systems of the Main Gym inside the Gym Building of the Umoja International Academy campus located at 5301 N Street in Sacramento, California.

If any other suspect materials not listed as having been sampled in this or previous reports are discovered, which will be impacted during the project, those materials must be assumed to contain asbestos/lead until properly inspected and tested for asbestos/lead content.

Entek's policy is to retain a full copy of these written documents for three (3) years once the file is closed. At the end of the three (3) year period the written files will be destroyed without further notice. It is suggested copies of the file(s) are maintained as per the district's policy. Entek will be providing only this electronic copy of the report and its attachments for your use. Thank you for choosing Entek for your environmental needs. Please call me at (916) 632-6800 if you have any questions regarding this report.

Sincerely,

Jose Hernandez, CAC, I/A
Project Manager

Reviewed By:

Blake Howes, CAC, I/A
Vice President

Attachments

APPENDIX A

ASBESTOS RELATED DOCUMENTS

- Bulk Asbestos Analysis Report From Eurofins/EMLab
- Bulk Asbestos Material Analysis Request Form for Entek
- Asbestos Bulk Sample Location Drawings
- SMAQMD Asbestos Survey Form
- SMAQMD Demolition/Renovation Form (To be completed by Owner)

Report for:

Jose Hernandez, Mr. Blake Howes
Entek Consulting Group
3435 American River Drive
Suite C
Sacramento, CA 95864

Regarding: Eurofins Built Environment Testing West, LLC
Project: 26-8135; Sacramento City USD - Umoja International Academy
EML ID: 4469434

Approved by:

Approved Signatory
James Schatz

Dates of Analysis:
Asbestos PLM: 03-31-2026

Service SOPs: Asbestos PLM (EPA 40CFR App E to Sub E of Part 763 & EPA 600/R-93-116, EBET-PLM-SOP83921)
NVLAP Lab Code 600397-0

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 and tested. 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 Built Environment Testing West, LLC ("the Company"), a member of the Eurofins Built Environment Testing group of companies, shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins Built Environment Testing West, LLC
180 Blue Ravine Rd, Folsom, CA 95630
(833) 465-5857 www.eurofinsus.com/Built

Client: Entek Consulting Group
C/O: Jose Hernandez, Mr. Blake Howes
Re: 26-8135; Sacramento City USD - Umoja International Academy

Date of Sampling: 03-26-2026
Date of Receipt: 03-27-2026
Date of Report: 04-01-2026

ASBESTOS PLM REPORT

Total Samples Submitted:	2
Total Samples Analyzed:	2
Total Samples with Layer Asbestos Content > 1%:	0

Location: ECG-26-8135-01A, Black Angled Vinyl Base Cove with Mastic - North Wall of Gym

Lab ID-Version‡: 22460231-1

Sample Layers	Asbestos Content
Black Cove Base	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

Location: ECG-26-8135-01B, Black Angled Vinyl Base Cove with Mastic - North Wall of Gym

Lab ID-Version‡: 22460232-1

Sample Layers	Asbestos Content
Black Cove Base	ND
Yellow Mastic	ND
Sample Composite Homogeneity:	Good

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

All components not quantified as asbestos content and non-asbestos content are considered to be non-fibrous matrix components. Matrix components may include, but are not limited to, gypsum, paint, silicate minerals, vinyl, binder, calcium carbonate, tar, and foam.

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 Built Environment Testing West, LLC
180 Blue Ravine Rd, Folsom, CA 95630
(833) 465-5857 www.eurofinsus.com/Built

Client: Entek Consulting Group
C/O: Jose Hernandez, Mr. Blake Howes
Re: 26-8135; Sacramento City USD - Umoja International Academy

Date of Sampling: 03-26-2026
Date of Receipt: 03-27-2026
Date of Report: 04-01-2026

ASBESTOS PLM REPORT

PROJECT ANALYST AND SIGNATORY REPORT

Project Analyst

Analyst: Samantha Pierce

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

‡ 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".

CHAIN OF CUSTODY

www.eurofinsus.com/Built

ENTEK CONSULTING GROUP, INC.

Weather		Fog	Rain	Snow	Wind	Clear
Level	None	☒	☒	☒	☒	☐
	Light	☐	☐	☐	☐	
	Moderate	☐	☐	☐	☐	
	Heavy	☐	☐	☐	☐	

EMLab ID
4469434

New Jersey: 3000 Lincoln Drive East, Suite A, Marlton, NJ 08053 * **(866) 871-1984**
Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * **(800) 651-4802**
Burlingame, CA: 111 Anza Blvd., Suite 122, Burlingame, CA 94010 * **(833) 465-5857**

CONTACT INFORMATION

Company:	Entek Consulting Group (9697)	Address:	3435 American River Drive Suite C Sacramento, CA 95864
Contact:	Jose Hernandez, Blake Howes	Special Instructions:	Stop analysis upon first positive result (1%) for sample in a series. Also stop analysis upon first positive result (1%) in the joint compound for sample series.
Phone:	916-824-5580		

PROJECT INFORMATION

Project ID:	26-8135		
Project Description:	Sacramento City USD - Umoja International Academy		
Project Zip Code:	95819	Sampling Date & Time:	03/26/2026 12:30 PM
PO Number:	26-8135	Sampled By:	Jose Hernandez

TURN AROUND TIME CODES (TAT)

STD – Standard (DEFAULT)
ND – Next Business Day
SD –Same Business Day Rush
WH – Weekend / Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

REQUESTI SERVICE

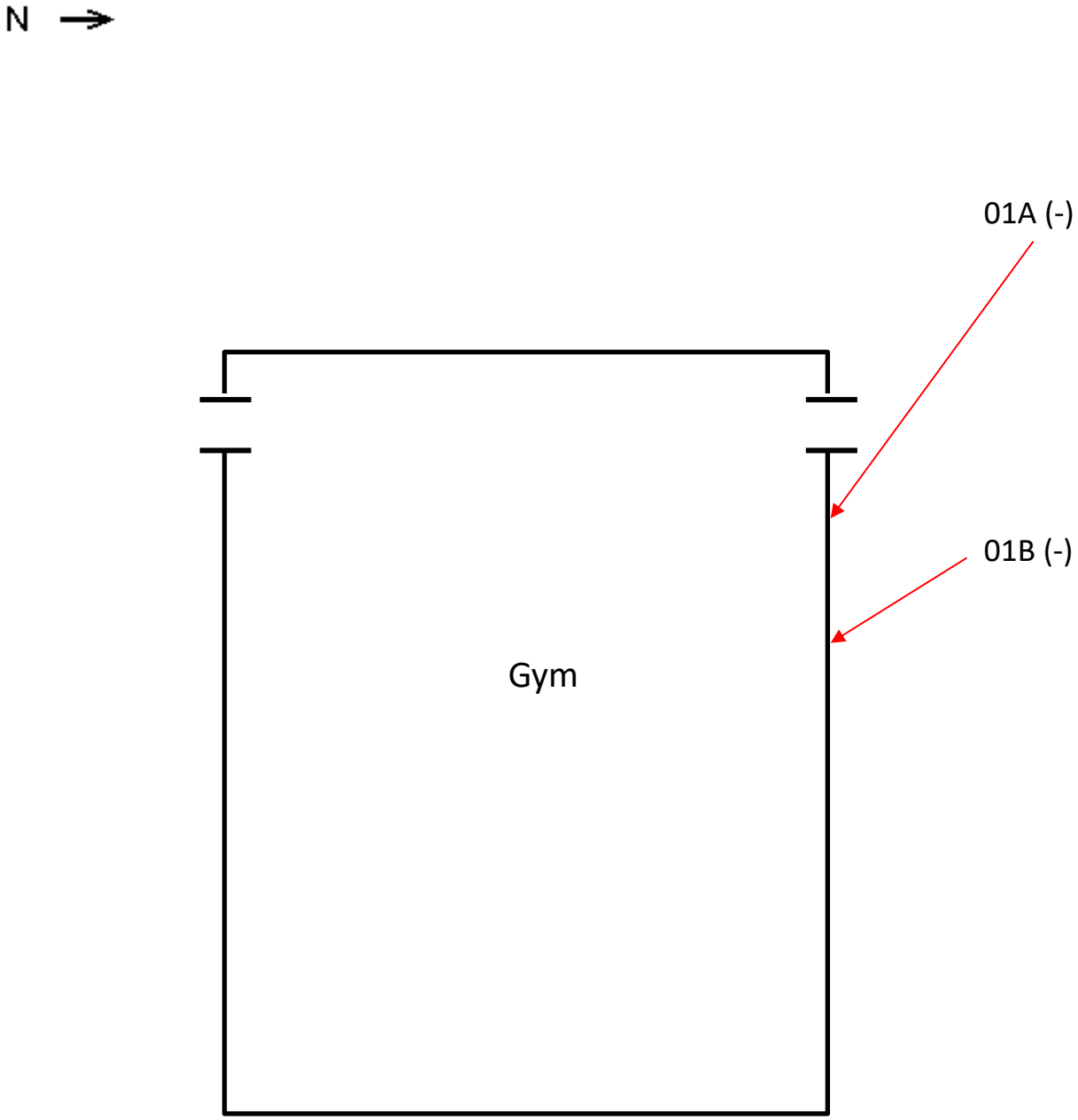
(Use checkboxes below)

Sample ID	Description	Sample Type (Below)	TAT (Above)	Volume / Area (as applicable)	ISO Class (as applicable)	Notes (Time of day, Temp, RH, etc.)	Asbestos PLM					
ECG-26-8135-01A	Black Angled Vinyl Base Cove with Mastic - North Wall of Gym	B	STD	N/A			☒	☐	☐	☐	☐	☐
ECG-26-8135-01B	Black Angled Vinyl Base Cove with Mastic - North Wall of Gym	B	STD	N/A			☒	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐
							☐	☐	☐	☐	☐	☐

SAMPLE TYPE CODES	RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
B - Bulk sample	Jose Hernandez	3/26/2026 6:52 PM	Renee Reyes, Analyst	3/27/2026 2:45 PM

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at:
https://www.eurofinsus.com/environment-testing/built-environment/resources/sampling-guides-and-forms/

Copyright © 2024 Eurofins EPK Built Environment Testing, LLC



Sacramento City Unified School District Umoja International Academy 5301 N St, Sacramento, CA 95819	Entek Consulting Group, Inc. 3435 American River Dr, Ste C Sacramento, CA 95864 Map Not to Scale	Asbestos Bulk Sample Locations Collected by Jose Hernandez On March 26, 2026 Project Number 26-8135

Asbestos Survey Form

(See Instructions)

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

777 12th Street, 3rd Floor
Sacramento, CA 95814
Office (916) 874-4800
Fax (916) 874-4899
Email:
asbestos@airquaility.org

1. Purpose of Survey	✔ **Renovation**	☐ **Demolition**

2. Facility Information

Project Area(s) Description: Umoja International Academy, Gym		
Address: 5301 N Street	City: Sacramento	# of Structures: 1

3. Owner Information

Name: Sacramento City Unified School District			
Address: 425 1st Avenue		City/State: Sacramento CA	Zip: 95818
Contact: Chris Ralston	Phone: (916) 395-3970	Fax:	Email: chris-ralston@scusd.edu

4. Consultant Information — **Survey Date(s):** 03/26/2026

Company Name: Entek Consulting Group, Inc.			
Name: Jose Hernandez			DOSH #: 22-6995
Address: 3435 American River Drive, Suite C		City/State: Sacramento, California	Zip: 95864
Phone: (916) 632-6800	Fax:	Email: jhernandez@entekgroup.com	Signature:

5. Client Information (If different than owner) ☐ **General Contractor** ☐ **Insurance Company** ☐ **Architect** ☐ **Property Manager** ☐ **Other** _____

Name:			
Address:		City/State:	Zip:
Contact:	Phone:	Fax:	Email:

6. Have all of the suspect materials that will be disturbed been sampled?	■ Yes ☐ No

If no, explain why:
The gym flooring was not sampled per district representative and will be assumed ACM.

7. Summary of Total Asbestos Containing Material (ACM) Findings

Regulated Asbestos Containing Material (RACM) (Includes materials subject to known mechanical removal and fire damaged materials)			**Category II**		**Category I**	
Square Ft.	Linear Ft.	Cubic Ft.	Square Ft.	Linear Ft.	Square Ft.	Linear Ft.
0	0	0	13,300	0	0	0

To receive future SMAQMD Rule updates and changes affecting your industry (check one box):

☐ Please send e-mail notices to	☐ I will sign up myself at www.airquality.org/listserve/ to receive emailed notices.
■ I am already subscribed.	☐ I want the District to mail notices to the address on this application: ☐ Owner ☐ Consultant

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Asbestos Renovation/Demolition Notification Form

777 12th Street, 3rd Floor
Sacramento, CA 95814
Office (279) 207-1122
Fax (279) 207-1144
Asbestos@airquality.org

1	Building Department Permit Application # (if known) : _____	☑ Renovation (Do not complete Section 5) ☐ Demolition (Complete all sections) ☐ Ordered Demo - Attach ordered demo letter ☐ Emergency Demo - SMAQMD Emergency #: _____

2	Contractor	Owner Sacramento City Unified School District-Chris Ralston
	Address	Address 425 1st Avenue
	City, State / Zip	City, State / Zip Sacramento CA 95818
	Email	Email chris-ralston@scusd.edu
	Telephone	Telephone (916) 395-3970

3	Structure Name Umoja International Academy	Renovation Area Gym	# of Floors 1
	Project Address 5301 N Street	City / Zip Sacramento, CA 95819	Year Built Unknown

4	**Preference for return of form**	☐ **E-mail :**	☐ **Other :**

DEMOLITION ONLY – Start date must be at least 10 working days from the day of your postmark or hand delivery of this form.

5	Start Date _____ _____ _____ Completion Date _____ _____ _____	Revision # 1 2 3 4 5 6 7 8 9 (circle) New Start Date _____ _____ _____ New Completion Date _____ _____ _____
	Method of Demo (Check Applicable): ☐Manual/Hand Tools ☐Mechanical/Heavy Equipment ☐Other	
	Procedure to be followed if RACM is found or Category II material becomes friable:	

I have read and understand the directions. The information on this form is true and accurate.
I certify that the asbestos survey conducted represents the facility as built.

6	Applicant Name (Print)	☐ Owner ☐ Rep / Agent ☐ Contractor	**Permit may be issued on:**
	Phone Number		
	Applicant's Signature	Date	

Have DOSH Consultant complete and sign below OR attach completed Asbestos Survey Form and Consultant's report.

CONSULTANT USE ONLY			
Company Name Entek Consulting Group, Inc.		Telephone (916) 632-6800	
Surveyor Name Jose Hernandez		DOSH # 22-6995	Survey Date 03-26-2026
Analytical Method PLM by Dispersion Staining		Pt Count Materials <10%? ☐Yes ☑ No ☐ Declined by Client	
Amount of RACM	Square Feet 0	Linear Feet 0	Cubic Feet 0
Amount of Category I 0		Amount of Category II 13,300	
Project Address 5301 N Street		City Sacramento	Zip 95819
Suspect Materials Present? ☑Yes ☐ No		Consultant's Signature	

SMAQMD USE ONLY

Date Received / Date Postmarked _____ Date Approved & Returned _____

Project # _____ Check # _____ Receipt # _____ Amount Paid _____ Staff _____

APPENDIX B

LEAD RELATED DOCUMENTS

- Lead in Paint Samples Analysis Report From Eurofins/EMLab
- Bulk Lead Material Analysis Request Form for Entek
- Lead Bulk Sample Location Drawings
- Lead XRF Reading
- Lead Hazard Evaluation Report (CDPH 8552)

eurofins | Built Environment Testing

ENTEK CONSULTING GROUP, INC.

Report for:

Jose Hernandez
Entek Consulting Group
3435 American River Drive
Suite C
Sacramento, CA 95864

Regarding: Eurofins Built Environment Testing West, LLC
Project: 26-8135 Sacramento City USD; Umoja International Academy 5301 N Street, Sacramento, CA
EML ID: 4472444

Approved by:

Signatory
Frank Raviola

Dates of Analysis:
Lead - Flame AA: 03-31-2026

Service SOPs: Lead - Flame AA (EB-BC-S-8443)
AIHA LAP, LLC accredited service, Lab ID #101768

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested. Sample size, as it relates to Wipe samples only, is supplied by the client.

Eurofins Built Environment Testing West, LLC ("the Company"), a member of the Eurofins Built Environment Testing group of companies, shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.
Eurofins Built Environment Testing West, LLC's LabServe® reporting system includes automated fail-safes to ensure that all AIHA LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Eurofins Built Environment Testing West, LLC
5900 Hollis Street, Suite M, Emeryville, CA 94608
(833) 465-5857 www.eurofinsus.com/Built

Client: Entek Consulting Group
C/O: Jose Hernandez
Re: 26-8135 Sacramento City USD; Umoja International Academy 5301 N Street, Sacramento, CA

Date of Sampling: 03-26-2026
Date of Receipt: 03-30-2026
Date of Report: 04-01-2026

LEAD: FLAME ATOMIC ABSORPTION SPECTROMETRY

Location:	ECG-26-8135-01Pb: Varnish on wood wall panels - gymnasium building, north side of the gym	ECG-26-8135-02Pb: Black paint on wood floor trim - gymnasium building, northwest side of the gym, at edge	ECG-26-8135-03Pb: Varnish on wood wall panels - gymnasium building, northwest side of the gym
Comments (see below)	None	None	None
Lab ID-Version‡:	22477428-1	22477429-1	22477430-1
Analysis Date:	03/31/2026	03/31/2026	03/31/2026
Sample type	Bulk sample	Bulk sample	Bulk sample
Method*	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified	NIOSH 7082 & EPA 7000B modified
† Method Reporting Limit	67 ppm	42 ppm	41 ppm
Sample size	0.1490 grams	0.2360 grams	0.2410 grams
§Total Lead Result	< 67 ppm	< 42 ppm	< 41 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.

Estimated accuracy is solely based on recovery data from internal laboratory control samples at the 95% confidence interval (k ~ 2) of the level of concern, derived from a 1,000-ppm certified lead reference.

*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".

ENTEK

BULK LEAD MATERIAL *Analysis Request*

004472444

ENTEK CONSULTING GROUP, INC.
3435 AMERICAN RIVER DRIVE
SACRAMENTO, CA 95864
(916) 632-6800 PHONE
mainoffice@entekgroup.com

Date of Sampling: 3-26-26
Job Number: 26-8135
Client Name: Sacramento City USD
Site Address: Umoja International Academy
5301 N Street
Sacramento, CA 95819

Lab: Eurofins – Emeryville, CA
Collected by: Jose Hernandez
Turnaround Time: Standard Turnaround Time
Analysis Requested: Flame by Atomic Absorption

Special Instructions:

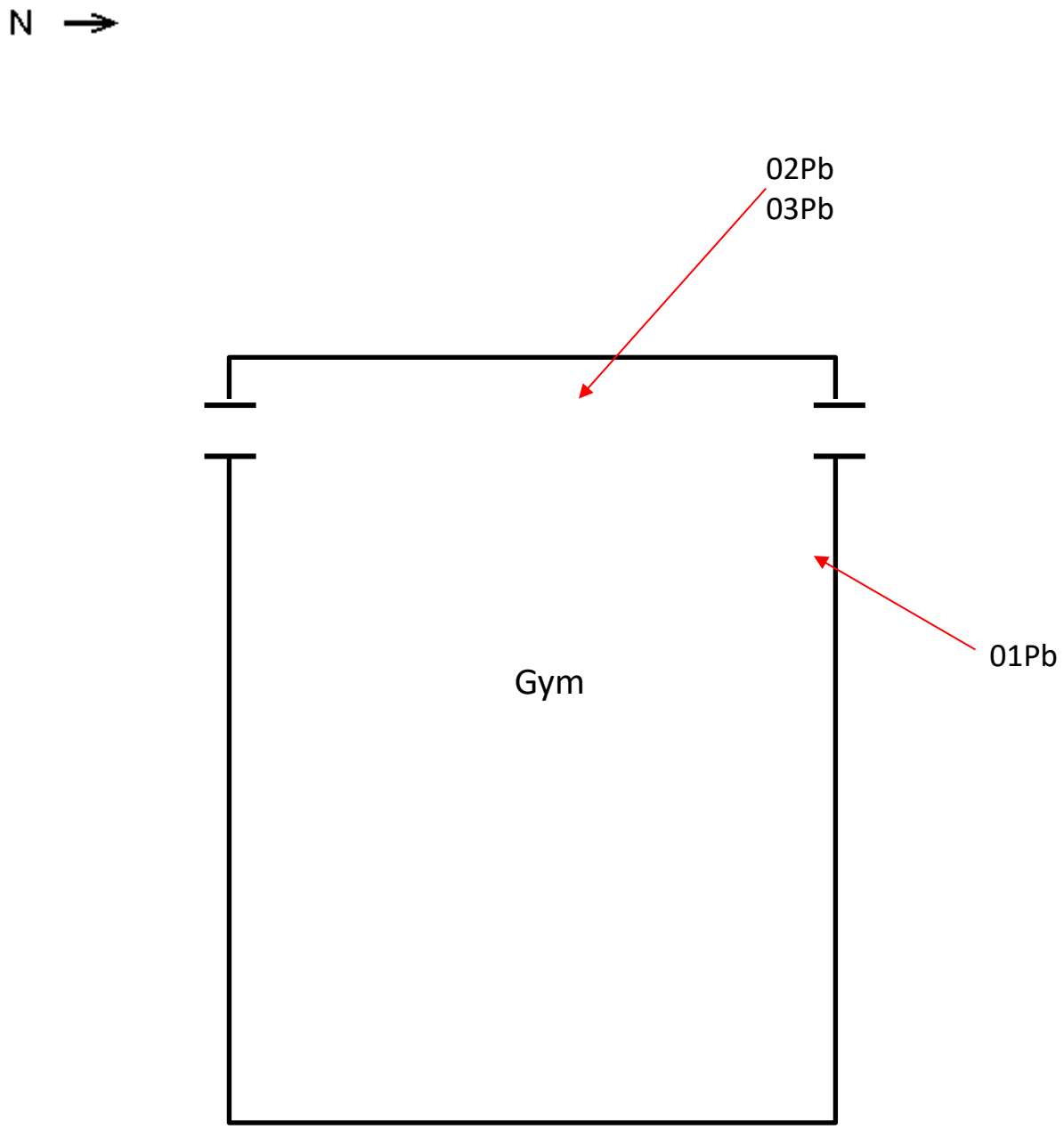
Please e-mail results at mainoffice@entekgroup.com as soon as available and include copy of submittal with those results.

SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-26-8135-01Pb	Varnish on Wood Wall Panels – Gymnasium Building, North Side of the Gym
ECG-26-8135-02Pb	Black Paint on Wood Floor Trim – Gymnasium Building, Northwest Side of the Gym, At Edge
ECG-26-8135-03Pb	Varnish on Wooden Floor– Gymnasium Building, Northwest Side of the Gym

Https://entekgroupinc.sharepoint.com/sites/Entekgroup/Shared Documents/Clients/Sacramento City USD/26-8135 Umoja Intl Academy, Gym - AsbPb/Bulk Pb/Bulk Pb Rqst 3-26-26.docx

Delivered by: [signature] via FedEx **Date:** 3/26/26 **Time:** 7:08 AM/PM

Received by: NS **Date:** 3/30/26 **Time:** 0945 AM/PM



Sacramento City Unified School District Umoja International Academy 5301 N St, Sacramento, CA 95819	Entek Consulting Group, Inc. 3435 American River Dr, Ste C Sacramento, CA 95864 Map Not to Scale	Lead Bulk Sample Locations Collected by Jose Hernandez On March 26, 2026 Project Number 26-8135

Date	Test #	Unit type	Calibration	Lead Result	Margin of Error	Description
3/26/2026 12:54	638	mg/cm2	PCS Cal	1	0.1	Calibration Test #1
3/26/2026 12:54	639	mg/cm2	PCS Cal	1.1	0.1	Calibration Test #2
3/26/2026 12:54	640	mg/cm2	PCS Cal	1	0.1	Calibration Test #3
3/26/2026 12:54	641	mg/cm2	PCS Cal	1	0.1	Calibration Average
3/26/2026 12:54	642	mg/cm2	LeadPaint	0	0.1	
3/26/2026 12:56	643	%	Soil	ND	< 0.01	
3/26/2026 12:57	644	%	Soil	ND	< 0.01	
3/26/2026 12:58	645	%	Soil	ND	< 0.01	
3/26/2026 12:59	646	%	Soil	0	0.01	
3/26/2026 13:01	647	%	Soil	34 ppm	0.01	Blue on metal door frames/doors - Gym building
3/26/2026 13:02	648	%	Soil	ND	< 0.01	
3/26/2026 13:04	649	%	Soil	ND	< 0.01	

LEAD HAZARD EVALUATION REPORT

Section 1 — Date of Lead Hazard Evaluation 03-26-2026

Section 2 — Type of Lead Hazard Evaluation (Check one box only)

- [x] Lead Inspection
- [ ] Risk assessment
- [ ] Clearance Inspection
- [ ] Other (specify) _____

Section 3 — Structure Where Lead Hazard Evaluation Was Conducted

Address [number, street, apartment (if applicable)]	City	County	Zip Code
5301 N Street	Sacramento	Sacramento	95819

Construction date (year) of structure: Unknown

Type of structure:
- [ ] Multi-unit building
- [x] School or daycare
- [ ] Single family dwelling
- [ ] Other _____

Children living in structure?
- [ ] Yes
- [x] No
- [ ] Don't Know

Section 4 — Owner of Structure (if business/agency, list contact person)

Name	Telephone number
Sacramento City Unified School District-Chris Ralston	(916) 395-3970

Address [number, street, apartment (if applicable)]	City	State	Zip Code
425 1st Avenue	Sacramento	CA	95818

Section 5 — Results of Lead Hazard Evaluation (check all that apply)

- [x] No lead-based paint detected
- [ ] Intact lead-based paint detected
- [ ] Deteriorated lead-based paint detected
- [ ] No lead hazards detected
- [ ] Lead-contaminated dust found
- [ ] Lead-contaminated soil found
- [x] Other intact lead-containing paint detected

Section 6 — Individual Conducting Lead Hazard Evaluation

Name	Telephone number
Entek Consulting Group, Inc. - Jose Hernandez	(916) 632-6800

Address [number, street, apartment (if applicable)]	City	State	Zip Code
3435 American River Drive, Suite C	Sacramento	CA	95864

CDPH certification number	Signature	Date
10754		05/04/2026

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

N/A

Section 7 — Attachments

A. A foundation diagram or sketch of the structure indicating the specifc locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

APPENDIX C

BACK UP DOCUMENTS

- Site Map
- Inspector Accreditations and Certifications
- Laboratory Accreditations for Asbestos and Lead Analysis

N

Sacramento City Unified School District Umoja International Academy 5301 N St. Sacramento, CA 95819	Entek Consulting Group, Inc. 3435 American River Dr, Ste C Sacramento, CA 95864 Map Not to Scale	Site Map Project Number 26-8135

State of California
Division of Occupational Safety and Health
Certified Asbestos Consultant

Jose A Hernandez

Name

Certification No. **22-6995**

Expires on **01/21/2027**

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq of the Business and Professions Code.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH

LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:	CERTIFICATE TYPE:	NUMBER:	EXPIRATION DATE:
Jose Hernandez	Lead Inspector/Assessor	LRC-00010754	1/9/2027

Disclaimer: This document alone should not be relied upon to confirm certification status. Compare the individual's photo and name to another valid form of government issued photo identification. Verify the individual's certification status by searching for Lead-Related Construction Professionals at www.cdph.ca.gov/programs/clppb or calling (800) 597-LEAD

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 600397-0

Eurofins Built Environment Testing West- Sacramento, CA

Folsom, CA

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique on ISO/IEC 17025).

2025-10-01 through 2026-09-30

Effective Dates

For the National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Eurofins Built Environment Testing West- Sacramento, CA
180 Blue Ravine Road
Folsom, CA 95630
Kuan W. Chen
Phone: 415-377-0751
Email: kuan.chen@et.eurofinsus.com
http://www.emlab.com

ASBESTOS FIBER ANALYSIS **NVLAP LAB CODE 600397-0**

Bulk Asbestos Analysis

Code	***Description***
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

For the National Voluntary Laboratory Accreditation Program

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

Eurofins Built Environment Testing West- Tustin, CA
Eurofins Built Environment Testing West, LLC
2841 Dow Ave Suite 300 Tustin, CA 92780
Laboratory ID: LAP-178697

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs, LLC (AIHA LAP) accreditation to the ISO/IEC 17025:2017 international standard, General Requirements for the Competence of Testing and Calibration Laboratories in the following:

LABORATORY ACCREDITATION PROGRAMS

☑	**INDUSTRIAL HYGIENE**	Accreditation Expires: January 01, 2028
☑	**ENVIRONMENTAL LEAD**	Accreditation Expires: January 01, 2028
☑	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: January 01, 2028
☐	**FOOD**	Accreditation Expires:
☐	**UNIQUE SCOPES**	Accreditation Expires:
☐	**BE FIELD/MOBILE**	Accreditation Expires:

Specific Field(s) of Testing/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached Scope of Accreditation. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2017 and AIHA LAP requirements. This certificate is not valid without the attached Scope of Accreditation. Please review the AIHA LAP website (www.aihaaccreditedlabs.org) for the most current Scope.

Olena Bulgakova

Olena Bulgakova
Accreditation Director, AIHA Laboratory Accreditation Programs, LLC

Revision22: 12/01/2025

Date Issued: 01/01/2026

AIHA Laboratory Accreditation Programs, LLC

SCOPE OF ACCREDITATION

Eurofins Built Environment Testing West- Tustin, CA

Eurofins Built Environment Testing West, LLC
2841 Dow Ave Suite 300 Tustin, CA 92780

Laboratory ID: LAP-178697

Issue Date: 01/01/2026

Expire Date: 01/01/2028

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air and composited wipes analyses are not included as part of the NLLAP.

Environmental Lead Laboratory Accreditation Program (ELLAP)

Initial Accreditation Date: 03/01/2017

Component, parameter, characteristic, material, or product tested	Technology sub-type/Detector	Method	Method Description *(for internal methods only)*
Paint	AA	EPA SW-846 7000B Modified	N/A
		NIOSH 7082	N/A
Settled Dust by Wipe	AA	EPA SW-846 7000B Modified	N/A
		NIOSH 7082	N/A

A complete listing of currently accredited ELLAP laboratories is available on the AIHA LAP, LLC website at: *http://www.aihaaccreditedlabs.org*

ASBESTOS REQUIREMENTS
TABLE OF CONTENTS

SECTION 1. ASBESTOS BIDDING REQUIREMENTS. 1
Part 1.1 - Site Investigations. 1
Part 1.2 - Insurance Requirements. 1
Part 1.3 - Licenses and Qualifications Requirements. 2

SECTION 2. ASBESTOS GENERAL REQUIREMENTS - DEFINITIONS. 2

SECTION 3. NOTIFICATIONS, SUBMISSIONS, POSTINGS. 8
Part 3.1 - Notification. 8
Part 3.2 - Pre-Construction Submittals.. 9
Part 3.3 - Submittals During the Work Process. 11
Part 3.4 - On-Site/Clean-Room Area Postings and Documentation. 11
Part 3.5 - Job Site Documents. 12
Part 3.6 - Project Close-out Documents.. 12

SECTION 4. SITE SECURITY. 12

SECTION 5. EMERGENCY PLANNING.. 13

SECTION 6. PRE-CONSTRUCTION MEETING. 14

SECTION 7. MATERIALS AND EQUIPMENT. 14
Part 7.1 - Contractor Equipment and Supplies.. 14
Part 7.2 - Rental Equipment and Supplies. 16

SECTION 8. WORK SITE FACILITIES.. 16

SECTION 9. RESPIRATORY PROTECTION.. 16

SECTION 10. PERSONNEL PROTECTION REQUIREMENT AND TRAINING. 20

SECTION 11. WORKER DECONTAMINATION ENCLOSURE SYSTEMS.. 20

SECTION 12. WORKPLACE ENTRY AND EXIT PROCEDURES.. 22

SECTION 13. DIFFERENTIAL AIR PRESSURE SYSTEMS. 23
Part 13.1 - Negative Pressure Requirements. 23
Part 13.2 - DOP Testing.. 23
Part 13.3 - Differential Pressure Recording Requirements. 24
Part 13.4 - Differential Pressure System. 24

SECTION 14. EXECUTION, WORK SCHEDULE. 25
Part 14.1 - Execution. 25
Part 14.2 - Power Outage Procedures. 28
Part 14.3 - Work Schedule.. 29

SECTION 15. REMOVAL PROCEDURES. 29

SECTION 16. WASTE CONTAINER PASS-OUT PROCEDURES. 30

SECTION 17. CLEAN-UP PROCEDURE.. 31
Part 17.1 - Clean-up Procedure. 31
Part 17.2 - Visual Clearance Criteria. 31

ASBESTOS REQUIREMENTS
TABLE OF CONTENTS

SECTION 18. CLEARANCE AIR MONITORING. 32

SECTION 19. MONITORING. 33

SECTION 20. DISPOSAL PROCEDURES. 33
Part 20.1 - Disposal Procedures. 33
Part 20.2 - Transportation to the Landfill. 34
Part 20.3 - Disposal at the Landfill. 34

SECTION 21. PATENTS AND PREVAILING WAGES. 35
Part 21.1 - Patents. 35
Part 21.2 - Prevailing Wage Requirements. 35

SECTION 22. PERMITS AND FEES. 35

SECTION 23. SPECIFIC PROCEDURES AND REQUIREMENTS. 35
Part 23.1 - General Repair of Damaged or Removal of Thermal System Insulation (TSI) 36
Part 23.2 - Glove Bag Technique Requirements. 37
Part 23.3 - Mini-Cube Enclosure Requirements.. 38
Part 23.4 - Roofing and HVAC Caulking Abatement Requirements. 39
Part 23.5 - Vinyl Floor Tile (VFT) & Associated Adhesive Abatement Requirements. . . 39
Part 23.6 - Carpet Removal over Vinyl Floor Tile (VFT)/Tile Adhesive Requirements. . 42
Part 23.7 - Sheetrock and Joint Compound Abatement Requirements. 44
Part 23.8 - Wood Floor & Associated Sublayers Removal Requirements. 46
Part 23.9 - Impact to and Removal of Transite Pipe, Shingle, or Sheeting Materials. . . 47
Part 23.10- Demolition with Selected Asbestos Containing Materials Left in Place. . . . 48
Part 23.11 - Contaminated Attic Space Procedures. 48
Part 23.12 - Non-Friable, Non-Hazardous, Glazing Abatement Requirements. 48
Part 23.13 - Subfloor Crawl Space Dirt Removal Requirements. 49
Part 23.14 - Subfloor Enclosure Requirements. 49
Part 23.15 - Installation of “Rat Slab” in Sublfoor Crawl Space Requirements. 49
Part 23.16 - Stucco/Texture/Plaster Removal and Containment Requirements. 49
Part 23.17 - Fireproofing and Cementitious Texture Plaster Abatement Requirements. 50

SECTION 24. ASBESTOS SPECIFICATIONS/PROCEDURES. 52
Part 24.1 - Contacts. 52
Part 24.2 - Removal Locations. 52
Part 24.3 - Materials to be Abated. 52
Part 24.4 - Containment and Abatement Requirements. 53
Part 24.5 - Contractor Assist Requirements.. 53
Part 24.6 - Worker Protection. 53
Part 24.7 - Electrical and Water Hook-Ups. 54
Part 24.8 - Visual and Air Clearance Criteria. 54
Part 24.9 - Owner’s Responsibility. 54
Part 24.10 - Disposal Requirements. 54
Part 24.11 - Work Periods. 54
Part 24.12 - Pre-Construction Submittal List. 56
Part 24.13 - Interim Construction Submittals. 58
Part 24.14 - Post Construction Submittal List. 58

SECTION 25. ASBESTOS RESULTS LIST. 60

SECTION 26. SITE MAP.. 62

ASBESTOS REQUIREMENTS
TABLE OF CONTENTS

SECTION 27. FORMS. 63

SECTION 1. ASBESTOS BIDDING REQUIREMENTS

Part 1.1 - Site Investigations

By submitting a bid for asbestos related work, the asbestos abatement contractor acknowledges that they have investigated and satisfied themselves as to: a) the conditions affecting the work, including but not limited to, physical conditions of the site which may bear upon site access, handling, and storage of tools and materials, access to water, electric, or other utilities, or otherwise affect performance of required activities; b) the character and quality of all surface and subsurface materials or obstacles to be encountered, in so far as, this information is reasonably ascertainable from an inspection of the site, including exploratory work done by the Owner or a designated consultant, as well as, information presented in drawings and specifications included with this contract. Any failure by the asbestos abatement contractor to acquaint themselves with available information will not relieve them from the responsibility for estimating properly the difficulty or cost of successfully performing the work. The Owner is not responsible for any conclusions or interpretations made by the asbestos abatement contractor on the basis of the information made available by the Owner.

Part 1.2 - Insurance Requirements

Successful asbestos abatement contractor shall purchase and maintain insurance that will protect them from claims that may arise out of or result from the activities under this Contract, whether those activities are performed by the asbestos abatement contractor, by any Subcontractor, or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.

Successful asbestos abatement contractor shall submit proof of coverage, as well as, Subcontractors under the Worker's Compensation insurance system of the State of California or other similar benefit acts.

Successful asbestos abatement contractor shall submit a certificate of general liability insurance protecting against liability for bodily injury and property damage arising from asbestos abatement contractor’s activities under this contract.

Such certificate of insurance must contain the following provisions:

(a) The limit of liability shall not be less than $1,000,000.00 per occurrence for bodily injury and property damage liability combined.

(b) The Owner, Owner’s Agents, and Consultant must be named as additional insured, but only in respect to liability arising or resulting from activities under this contract.

(c) In the event of cancellation of the insurance policy, the Owner shall be given thirty days advance written notice.

(d) The insurance certificate must state that the insurance includes liability coverage for asbestos abatement work.

Successful asbestos abatement contractor’s Subcontractors shall submit a certificate of general liability insurance protecting against liability for bodily injury and property damage arising from Contractor's activities under this contract.

Such certificates of insurance must contain the following provisions:

(a) The limit of liability shall not be less than $1,000,000.00 per occurrence for bodily injury and property damage liability combined.

(b) The Owner, Owner's Agents, and Consultant must be named as an additional insured, but only in respect to liability arising or resulting from activities under this contract.

(c) In the event of cancellation of the insurance policy, the Owner shall be given thirty days advance written notice.

Part 1.3 - Licenses and Qualifications Requirements

The asbestos abatement contractor shall be duly licensed in the State of California with the Contractors State License Board (CSLB) in accordance with the provisions of Chapter 9 of Division 3 of the Business and Professions Code, as amended. This includes certification for asbestos-related work, and all other trades or work required under this contract and within these specifications.

The asbestos abatement contractor shall submit a statement, signed by an officer of the company, containing the following information:

1. A record of any citations issued by Federal, State, or Local regulatory agencies within the last 3 years, relating to asbestos abatement activity. Include projects, dates, and resolutions.

2. A list of penalties incurred through non-compliance with asbestos abatement project specifications, including liquidated damages, overruns in scheduled time limitations, and resolutions.

3. Situations in which an asbestos-related contract has been terminated including projects, dates, and reasons for terminations.

4. A list of any asbestos-related legal proceedings/claims in which the Contractor (or employees scheduled to participate in this project) has participated or is currently involved. Include descriptions or role, issue, and resolution to date.

The asbestos abatement contractor is fully and totally responsible at all times for compliance with payment of prevailing wage rates pursuant to provisions of the California Labor Code, for compliance with Division 2, Part 7, Chapter 1, California Labor Code, including but not limited to Section 1776; and for compliance with California Labor Code, Section 1777.5 for all apprentice able occupations.

SECTION 2. ASBESTOS GENERAL REQUIREMENTS - DEFINITIONS

Abatement - Procedures beyond a special operations and maintenance program to control fiber release from asbestos-containing materials. Includes removal, encapsulation, enclosure, repair.

ACGIH - American Conference of Governmental Industrial Hygienists, 6500 Glenway Avenue, Building D-5, Cincinnati, Ohio 45211

AHERA - Asbestos Hazard Emergency Response Act

AIHA - American Industrial Hygiene Association, 475 Wolf Ledges Parkway, Akron, Ohio 44311

Air Filtration Device - See "Pressure Differential Unit"

Airlock - A system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area, typically consisting of two curtained doorways separated by a distance of at least three (3) feet such that one passes through one doorway into the airlock, allowing the doorway sheeting to overlap and close off the opening before proceeding through the second doorway, thereby preventing flow-through contamination.

Air Monitoring - The process of measuring the fiber content of a known volume of air collected during a specific period of time. The procedure normally utilized for asbestos follows the NIOSH Standard Analytical Method for Asbestos in Air P&CAM 239 or Method 7400. For clearance air monitoring, electron microscopy methods may be utilized for lower detection and specific fiber identification.

Air Sampling Professional - The professional contracted or employed by the Owner to supervise and/or conduct air monitoring and analysis schemes. This individual may also function as the Asbestos Project Manager, if qualified. Supervision of air sampling and evaluation of results should be performed by an individual certified in the Comprehensive Practice of Industrial Hygiene (CIH) or having specialized experience in air sampling for asbestos. Other acceptable Air Sampling Professionals include Environmental Engineers, Architects, Chemists and Environmental Scientists or others with equivalent experience in asbestos air monitoring. This individual shall not be affiliated in any way other than through this contract with the contractor performing the abatement work.

Ambient Air - The air outside the buildings and structures or the air as it normally exists in a space prior to abatement.

Amended Water - Water to which a surfactant has been added.

ANSI - American National Standards Institute, 1430 Broadway, New York, New York, 10018

Asbestos - Means the asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite grunerite (amosite), anthophyllite, actinolite, and tremolite.

Asbestos Containing Hazardous Waste - Materials defined by the State of California to be packaged, labeled, transported, and disposed of as an asbestos hazardous waste. This includes all friable asbestos-containing material over one-percent (1%) asbestos. This also includes all asbestos-containing material containing less than one-percent asbestos for which one or more bulk samples have not been point counted and found to contain less than one-percent (1%) asbestos.

Asbestos Containing Material (ACM) - Cal/OSHA - Material composed of asbestos of any type and in an amount greater than one percent (1%) either alone or mixed with fibrous or non-fibrous materials.

Asbestos Containing Construction Material (ACM) - a manufactured construction material containing greater than 0.1% asbestos by weight by the PLM method.

Asbestos Containing Waste - Asbestos-containing material or asbestos-contaminated objects requiring disposal.

Asbestos Project Manager (APM) - (Competent Person) - An individual qualified by virtue of experience and education, designated as the Owner's representative and responsible for overseeing the asbestos abatement project.

ASTM - American Society for Testing and Materials, 916 Race Street, Philadelphia, PA 19103.

Authorized Visitor - The Owner (and any designated representative) and any representative of a regulatory or other agency having jurisdiction over the project.

Bidder - A duly licensed and accredited asbestos contractor who was present at the bid-walk and has submitted a bid.

Cal/OSHA - California Division of Occupational Safety and Health.

Certified Asbestos Consultant (CAC) - A certified asbestos consultant as defined by the Department of Industrial Relations (Cal/OSHA).

Certified Industrial Hygienist (CIH) - An industrial hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene.

Clean Room - An uncontaminated area or room which is a part of the worker decontamination enclosure system with provisions for storage of workers' street clothes and clean protective equipment.

Competent Person - A person who is an accredited EPA Asbestos Contractor/Supervisor and whose accreditation is current.

Containment - Isolation of the work area from the rest of the building to prevent escape of asbestos fibers.

Contract Documents - Written contractual agreements between the Owner and the Contractor that pertain to the work on this project.

Contractor - The individual and/or legal entity and its subcontractors and employees of the contractor and subcontractor awarded the contract.

Contractor/Supervisor - A person who successfully completed an initial U.S. EPA and/or state-approved five-day AHERA accreditation course and who has maintained that training through approved annual refresher training, and possesses current and valid AHERA accreditation documentation as a AHERA accredited Contractor/Supervisor.

Class I, II, III, or IV Work - Work classes described in 8 CCR 1529 that describe different levels of asbestos work.

Critical Barrier - Critical Barriers used to restrict water and air flow. Critical Barriers are the barriers placed over openings in the walls and ceilings of a work area in order to ensure that airborne fibers cannot escape the work area via these openings. The Contractor will construct impermeable barriers at all exits or openings, including doorways, duct chases, mechanical shafts, elevator shafts, floor openings, drains, and the like, so that all possible exit or entrance routes are effectively barricaded and sealed. Unless otherwise specified in the Contract documents, critical barriers shall be constructed of at least one layer of 6-mil thick poly.

Critical Barrier Negative Pressure Test - Required test for negative pressure with only critical barriers and air filtration units installed. This test must be conducted prior to the installation of cleaning barriers, but may be conducted with or without the decontamination unit in place.

Decontamination Enclosure System - (Also known as Decon or Waste Transfer Decon) A series of connected rooms designed for the decontamination of workers and equipment that is separated from the work area and from each other by z-flapped curtained doorways. This unit shall be constructed with at least six-mil poly for the floors, walls, and ceiling. All decontamination enclosure systems used for worker entry and exit shall be equipped with a shower.

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

DOP - Dispersed Oil Particulate which are normally used as an agent for testing the efficiency of HEPA filters.

Dust or Debris - Any visible dust or debris remaining in an abatement area will be considered asbestos-containing residue.

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

EPA - U.S. Environmental Protection Agency

Equipment Room - A contaminated area or room which is part of the worker decontamination enclosure system with provisions for storage of contaminated clothing and equipment.

Exterior of Containment HEPA Filtered Pressure Differential Unit - An air-purifying unit positioned outside, rather than inside the regulated work area. The face, or filter portion of the unit is integrated within the work area, and the remainder of the unit (housing, wheels, rivets, control panel, etc.) is located outside of the work area. This allows filters on the air intake to be changed from within the regulated area but access to the machine itself is available to those outside the area. Pressure differential units which pass DOP testing across the HEPA filter, but fail at rivets, control panels, wheels, etc. may be used in this fashion as long as the failure point of the unit can remain on the exterior of containment while the face of the unit and filters are inside containment.

Facility - Any institutional, commercial or industrial structure, installation, or building.

Facility component - Any pipe, duct, boiler, tank, reactor, turbine, or furnace at or in a facility or any structural member or a facility.

Fed OSHA or OSHA - Federal Occupational Safety and Health Administration.

Fixed object - A piece of equipment or furniture in the work area which cannot be removed from the work area.

Friable asbestos - Asbestos-containing material which can be crumbled to dust when dry, under hand pressure or by mechanical means.

Glove Bag Technique - A method with limited applications for removing small amounts of friable asbestos-containing materials from ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces. The glove bag is constructed of 6 mil transparent polyethylene with two inward projecting long sleeves, an internal tool pouch, and an attached, labeled receptacle for asbestos waste.

HVAC - Heating, ventilation and air conditioning system.

HEPA Filter - A high efficiency particulate air filter capable of removing particles 0.3 microns in diameter from an air stream with 99.97% efficiency.

HEPA Vacuum - A vacuum system equipped with HEPA filtration.

Lock-down - To mist the air and to wet surfaces with an agent designed to bind asbestos fibers together.

Magnehelic gauge - Instrument for measuring the static air-pressure differential across a barrier.

Manometer - See "Magnehelic gauge".

Mini-Enclosure - Mini-enclosures shall be constructed of 6 mil polyethylene (attached with tape and/or glue to walls and floors) and shall be small enough for 1-2 workers who can enter the enclosure, complete the abatement exercise, pass out the containerized debris and exit.

Monitoring - May include:

a) Visual inspection for the presence of visible emissions; or
b) Air monitoring performed in accordance with accepted methods;
c) Core samples of encapsulated or bridged materials.
d) Bulk sampling of soil during and following abatement.
e) Sampling substrata following abatement.

Movable Object - An unattached piece of equipment or furniture in the work area which can be removed from the work area.

NVLAP - National Voluntary Laboratory Accreditation Program.

NESHAP - The National Emissions Standards for Hazardous Air Pollutants (40 CFR Part 61, Nov. 20, 1990)

NIOSH - The National Institute for Occupational Safety and Health CDC-NIOSH, Building J N.E. Room 3007, Atlanta, GA 30033

Outside Air - The air outside buildings and structures.

Owner - The Owner or Owners authorized Representative.

PCM - Phase contrast microscopy according to NIOSH Method 7400.

Plasticize - See "Poly".

Poly - Polyethylene sheeting. Used to cover floors, walls, ceilings, create critical barriers, and seal open vents on mechanical systems, etc. Note: All poly must be flame-retardant.

Pressure Differential Unit (PDU) - Also called negative air units. A portable exhaust system equipped with HEPA filtration and capable of exhausting air out the asbestos work area to create a negative pressure work

environment..

Regulated Area - means an area established by a Contractor to demarcate areas where airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed, the permissible exposure limit. Additionally "Regulated Area" means any measure used to restrict access to an area where personnel impacting asbestos-containing materials are required to wear respiratory protection and/or protective clothing by the project specifications regardless of airborne asbestos concentration levels.

Regulations - shall include but not be limited to:

a. U.S. Environmental Protection Agency Regulations for Asbestos (Title 40, Code of Federal Regulations, Part 61, Subparts A & B)

b. U.S. Environmental Protection Agency, Office of Toxic Substances, Asbestos-Containing Materials in School Buildings, A Guidance Document, Parts 1 & 2.

c. Title 8, Chapter 4, Subchapters 1 through 21, California Administrative Code, General Industry Safety orders, Section 5208 "Asbestos" or the applicable sections of the Federal Asbestos Regulations. Cal/OSHA Construction Safety Orders, Section 1529.

d. "Asbestos Hazard Emergency Response Act", U. S. Environmental Protection Agency, 40 CFR, Part 763. Final Rule and Notice.

e. Applicable local county Air Pollution Control Owners and Air Quality Management Districts.

Removal - The stripping of any asbestos-containing materials from surface or components of a facility.

Renovation - Altering in any way one or more facility components. Operations in which load-supporting structural members are wrecked or taken out are excluded.

Shower Room - A room between the clean room and the equipment room in the decontamination enclosure with hot and cold or warm running water controllable at the tap and suitably arranged for complete showering during decontamination. The shower room must be equipped with an overflow pan to contain water splashed, leaked or spilled out of the shower unit.

Staging Area - Either the holding area or some area near the waste transfer airlock where containerized asbestos waste has been placed prior to removal from the work area.

Structural Member - Any load-supporting member of a facility, such as beams and load-supporting walls or any non-load-supporting member, such as ceilings and non-load supporting walls.

Submittals - Pre, interim, and post job documents submitted by the contractor to Owner/Owner's Representative as indicated in General Requirements and Bidding Requirements.

Surfactant - A chemical agent added to water to improve wetting and penetration into asbestos materials.

TEM - Transmission Electron Microscopy according to AHERA specifications for Level II analysis.

Visible emissions - Any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

Waste Load-out/Transfer System - A decontamination system utilized for transferring containerized waste from inside to outside of the work area. A series of three connected rooms used for the load-out of asbestos-

containing materials that have been properly containerized. The waste load out chamber system shall normally consist of three connected chambers adjacent to the work area. Each chamber shall be constructed with six-mil thick poly for the floors, walls, and ceiling

Wet Cleaning - The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other utensils which have been dampened with water and afterwards thoroughly decontaminated or disposed of as asbestos contaminated waste.

Work Area - Designated rooms, spaces, or areas of the project in which asbestos abatement actions are to be undertaken or which may become contaminated as a result of such abatement actions. A contained work area is a work area which has been sealed, plasticized, and equipped with a decontamination enclosure system. A non-contained work area is an isolated or controlled-access work area which has not been plasticized nor equipped with a decontamination enclosure system.

Worker - Contractor employee who has completed course work and passed the exam for an EPA accredited, AHERA asbestos abatement worker. Certificate must be current.

SECTION 3. NOTIFICATIONS, SUBMISSIONS, POSTINGS

Part 3.1 - Notification

Prior to commencement of work the Contractor shall send notices of work to be completed to the agencies listed below with a copy of each to be provided to the Owner or its representative at the pre-construction meeting.

For compliance with 40 CFR part 61.146 of Subpart M, send notice at least 10 working days prior to start of work to the following appropriate agencies if trigger quantities of RACM are met or for a demolition:

Sacramento Metropolitan AQMD
777 12th Street, Third Floor
Sacramento, CA 95814-1908
Phone: (916) 874-4800
Fax: (916) 874-4899

U.S. EPA - Region IX
Asbestos NESHAP Notification (Air 5)
75 Hawthorne Street
San Francisco, California 94105
Tel (415) 947-4182

For compliance with Title 8, California Administrative Code, Construction Safety Order 1529, Asbestos Regulations send written notice at least one day prior to start of work to:

State of California
Department of Occupational Safety and Health (Cal/OSHA)

These notices shall include, at a minimum, the name and address of the Contractor, the name and address of the work site, the type of work to be done including the percent asbestos content of the material, the methods used to prevent migration of the fibers, personal protective measures, the number of his workers involved, any union representation of the workers and the methods of disposal including the names and EPA numbers of both the certified hauler and the waste disposal site. The notices shall also include start and finish dates. Changes in start and completion dates shall be reported immediately to the proper agency. Use forms provided by agency whenever possible.

Part 3.2 - Pre-Construction Submittals

Submit copies of documents required to be included in the Bidding Requirements. At a minimum these documents will include:

1. Copy of State of California Contractor License Issued by CSLB
2. Copy of State of California CSLB Active License
3. Copy of State of California CSLB Asbestos Certification
4. Copy of Department of Industrial Relations; Division of Occupational Safety and Health; Certificate of Registration for Asbestos-related Work
5. Copy of signed statement from company officer listing citations and pending proceedings against the Contractor, or if there have been no citations, a copy of the statement that no actions by regulatory agencies have occurred in the last three years signed by an officer of the company.

Submit copies of insurance certificates which meet requirements as outlined in Section 1, Part 1.2, of this Specification.

Submit copies of notifications to government agencies.

Submit proof satisfactory to the Owner that required permits have been acquired applicable to the project being performed and specific to the project site and location. If no city, county, or other permits for parking, waste container location, or variances for scheduled work hours are required this should be stated in writing and submitted to the Owner.

Submit Sub-contractors information or statement that Sub-contractors will not be required or used during this project. This statement should also include that if it becomes necessary to use a Sub-contractor during this project that Sub-contractor will not be allowed to perform work until all required documentation has been submitted for review by the Owner or Owner's CAC, and the Contractor receives written approval for use of the Sub-contractor on this project.

Submit a complete list of all rented equipment, or equipment expected to be rented from an outside contractor for use in "Regulated Areas", "Work Areas", or "Containments", where the equipment may be exposed to elevated levels of airborne asbestos. If no equipment is to be rented a statement should be submitted stating no equipment will be used on the project. The statement should also include that if it becomes necessary to use rented equipment that written statements from each rental company will be provided to the Owner prior to its use, indicating the rental companies acknowledgment that the equipment is provided for and may be used in areas where airborne levels of asbestos may be present.

Submit non-emergency telephone numbers, other then 911, for the appropriate Police, Sheriff, and Fire Departments. This list of numbers shall also include the Name, pager or cell phone numbers of the on-site supervisor and his immediate company supervisor.

Submit detailed written directions from the project site to the medical facility to be used in case of an emergency. Also include a map which sufficiently shows the route to be taken from the site to the designated medical facility.

Submit written emergency procedures pertinent to the work to be performed and which can be implemented by site personnel if the need arises.

Submit detailed information on preparation of work area, personal protective equipment, employee experience, training and assigned responsibilities during the project. Also list decontamination procedures for personnel, work area and equipment, abatement methods and procedures, required air monitoring program, procedures for handling and disposing of waste materials and procedures for final decontamination and cleanup.

Submit a detailed work schedule. The schedule shall have, as a minimum, the work area and the day/month for beginning and terminating work in each work area. During progress of work, it shall be the Contractor's responsibility to keep the schedule current and up to date.

Submit documentation satisfactory to the Owner that the Contractor's employees, including foremen, supervisor, and any other company personnel or agents who may be exposed to airborne asbestos fibers or who may be responsible for any aspects of abatement activities, have received required US EPA AHERA training.

Submit documentation from physician that all employees or agents who may be exposed to airborne asbestos in excess of background levels have been provided with an opportunity to be medically monitored to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. In addition, document that personnel have received medical monitoring as required by Cal/OSHA regulations. The Contractor must be aware of and provide information to the examining physician about unusual conditions in the workplace environment (e.g., high temperatures, humidity, chemical contaminants) that may impact on the employee's ability to perform work activities.

Submit documentation of respirator fit-testing for all Contractor employees and agents who must enter any work area where asbestos-containing materials may or will be impacted. This fit-testing shall be in accordance with qualitative procedures as required by OSHA regulations or be quantitative in nature. Documentation pertaining to NIOSH approvals for all respiratory protective devices utilized on site shall also be included.

Submit copy of waste transporters Department of Toxic Substances Control, Hazardous Waste Transporter Registration if hazardous asbestos-containing waste is to be removed during the project. If hazardous asbestos-containing waste will not be generated submit the name, address, and registration information for the waste hauler to be used for transporting the waste.

Submit documentation listing the name and site address of the waste facility designated to receive asbestos-containing waste generated during this project. This documentation shall also include the EPA Identification number, and a copy of the current permit authorizing the waste facility to accept and dispose of asbestos-containing waste.

Submit Safety data sheets (SDS) for any and all applicable, materials, supplies, etc. These documents must be legible and completely reveal information required to be communicated to the Contractor’s employees, visitors, and Owner Representatives.

Submit manufacturers' certifications that high efficiency particulate air (HEPA) vacuums, pressure differential units and other local exhaust ventilation equipment conform to ANSI Z9.2-79.

Submit name of laboratory/person to be used for Phase Contrast Microscopy (PCM) analysis and copy of current NVLAP Certificate of Accreditation (if applicable), and most recent NIOSH Proficiency Analytical Testing Program results.

Submit a written statement that OSHA monitoring will be performed for all asbestos-related activities performed during this project. This statement must be on company letterhead, dated, include name of the site or project being worked on, and signed by an authorized agent of the company performing the asbestos-related work.

Submit manufactures documentation pertaining to the capability of waste water filters to filter particles of 1.0 micron in size.

Part 3.3 - Submittals During the Work Process

Submit weekly - copies of work site entry/exit logs as well as information on worker and visitor access.

Submit weekly - copies of results of air sampling data collected during the course of the abatement including OSHA compliance air monitoring results.

Submit weekly - copies of air-differential manometer graphs and HEPA filter change logs. (see Section 13)

Submit weekly - copies of all transport manifests, trip tickets, weights and disposal receipts as applicable for all asbestos waste materials removed from the site during the abatement process.

Submit as applicable - copies of current insurance certificates, notifications, worker documentation, etc. if these items expire during the course of the project.

During abatement the Owner will upon request submit to the Contractor results of bulk material analyses and air sampling data collected during the course of the abatement. These serve only to monitor Contractor performance during the project.

Submit upon request during or after completion of the project, documentation deemed by the Owner to be pertinent to the project.

Part 3.4 - On-Site/Clean-Room Area Postings and Documentation

The following items shall be posted at the entrance to “Regulated Areas”, “Work Areas”, and “Containments”, or in the possession of the Contractor’s on-site supervisor where respiratory protection or protective clothing is required by this Specification.

A Cal/OSHA Information poster and a Cal/OSHA Construction Site poster.

A copy of the CAL-OSHA and the local AQMD/APCD or EPA NESHAP Notification (if applicable).

Non-emergency telephone numbers, other then 911, for the appropriate Police, Sheriff, and Fire Departments. This list of numbers shall also include the Name, pager or cell phone numbers of the on-site supervisor and his immediate company supervisor. Detailed written directions from the project site to the medical facility to be used in case of an emergency. Also a map which sufficiently shows the route to be taken from the site to the designated medical facility.

Written emergency procedures pertinent to the work to be performed and which can be implemented by site personnel if the need arises.

Written entry/exit procedures shall be posted in the clean room and equipment room. (See Section 12)

List of persons authorized to be in restricted area. The list shall include, among others, the following names with addresses and phone numbers:

Contractor	Air-sampling Professional	Asbestos Project Manager
Testing Laboratory	Owner's representatives	Any other designated by the Owner

Entry/exit log for work performed in all “Regulated Areas”, “Work Areas”, and “Containments” where respiratory protection or protective clothing is required by this Specification. Contractor shall maintain copies of all entry/exit logs on the site during the performance of asbestos-related work.

All of the Contractor's personnel and area air sampling results shall be posted in the clean room area or in the possession of the Contractor’s site supervisor if no decontamination unit is required for the work being performed within 72 hours of collection, and submitted to Owner’s CAC weekly unless otherwise noted.

Copies of Safety data sheets (SDS) for all materials on-site.

Part 3.5 - Job Site Documents

The following shall be in the possession of the Contractor’s supervisor at each job site:

1. All contract specifications to include, change orders, etc. Contractor competent person must sign a document stating he has full knowledge of all Sections included in this specification.
2. Written Injury and Illness Prevention Program.
3. Written Respiratory Protection Program
4. An updated list of all contractor employees who have worked on this job.
5. List of all US EPA AHERA competent employees (supervisors).
6. Training records
7. Medical records
8. Respiratory fit test records

Part 3.6 - Project Close-out Documents

Contractor shall submit post-construction submittals to Owner/Owner’s Representative within thirty (30) days of the completion of asbestos-related work. This documentation shall include at a minimum any and all applicable documents as outlined in Part 3.2 and Part 3.3 of this Section. In addition the Contractor should consult and submit as applicable documents identified in Section 24, Part 24.3 - Post Construction Submittal List

SECTION 4. SITE SECURITY

The work area is to be restricted to authorized, trained and protected personnel. A list of authorized personnel shall be established prior to job start and posted in the clean room of the work decontamination facility, or in the possession of the on-site supervisor for the Contractor.

Contractor shall report to the Owner immediately entry into the work area by unauthorized individuals.

A log book shall be maintained during the project. Anyone who enters the work areas must record name, affiliation, time in, and time out for each entry.

Access to all “Regulated Areas”, “Work Areas”, and “Containments” shall be through a designated entry point. All other means of access (doors, windows, hallways, etc.) shall be blocked or locked so as to prevent entry to or exit from these areas. The only exceptions for this rule are the waste pass out air-lock, and emergency exits in case of fire or accident.

Emergency exits shall NOT be locked, however, they shall be sealed with polyethylene sheeting and tape until needed. All emergency exits shall be clearly designated. They shall also have a razor knife permanently in place to facilitate emergency exit.

Contractor should have control of site security during abatement operations whenever possible, in order to protect work efforts and equipment. During off-hours access to the abatement area shall be restricted by a lockable entry.

Contractor will have Owner's assistance in the enforcement of restricted access by Owner's employees.

Storage of debris will be such that access to it is limited to the Contractor. Lockable bins shall be utilized and they shall be locked at all times except when loading occurs. No soft covers will be allowed for any storage containers. When a container with rolling tops is being used all access points to the interior of the container must be secured by the Contractor with locks of sufficient strength to require special effort to gain access to the interior of the waste container.

SECTION 5. EMERGENCY PLANNING

Emergency planning and procedures shall be developed by the Contractor and shall include considerations of fire, explosion, toxic atmospheres, electrical hazards, slips, trips and falls, and heat related injury and agreed to by Contractor and Owner prior to abatement initiation. These emergency procedures shall be established and presented to all employees and the Owner prior to the beginning of any work. A written emergency plan shall be posted or in the possession of the on-site supervisor for the Contractor regardless of the work being performed.

A copy of the Contractor’s written Injury and Illness Prevention Program shall be posted or in the possession of the on-site supervisor for the Contractor regardless of the work being performed.

Employees shall be trained in evacuation procedures in the event of workplace emergencies. Telephone numbers of all emergency response personnel shall either be in the possession of the on-site supervisor, or be prominently posted in the clean change area and equipment room, along with the locations of the nearest telephone indicated on a map or diagram.

At least two fire extinguishers shall be present on site and in close proximity to the work being performed regardless of the type of work being conducted. At least one fire extinguisher shall be present outside of any containment. Additional extinguishers shall be distributed according to Cal/OSHA requirements or as identified in this Specification.

When open abatement is being performed, an emergency blast horn (canned air horn) shall be placed inside of containment for emergency evacuation in the event of a fire or other emergency.

If noted in any other section of this Specification, a means of communication shall be established between inside and outside of containment whenever a decontamination setup is required, particularly for all open abatement projects. This requirement may be met through walkie talkies or cell phones.

During hot working conditions, such as in an attic space during summer, or in containments where live steam or hot water lines are exposed, special attention must be given to the possibility of heat stress and burns. The Owner's site representative may make recommendations for work breaks for employees, but the supervisor is ultimately responsible for his workers.

SECTION 6. PRE-CONSTRUCTION MEETING

A pre-construction meeting will be held at a time and location to be determined by the Owner. The successful Bidder, his on-site supervisory personnel, and Air Sampling Professional (if applicable), representatives of the Owner, Owner's Representative, and other individuals as necessary shall be present at this meeting.

At this meeting the Contractor shall provide all required submittals, as indicated above in Section 3, Part 3.2. The Contractor should use the Pre-Construction Submittal List provided in Section 24, Part 24.1 to assure all required submittals are included in his submittal package.

SECTION 7. MATERIALS AND EQUIPMENT

Part 7.1 - Contractor Equipment and Supplies

Deliver all consumable materials in the original packages, containers or bundles bearing the name of the manufacturer and brand name (where applicable). These must be approved by the Owner. Polyethylene (Poly) sheeting, of appropriate thicknesses for walls, floors, and ceilings, (4 mil's thick for walls, 10 mil's thick for lining of waste containers, 6 mil's thick for floors and all other uses), shall be provided in widths selected to minimize the frequency of joints.

All poly shall be flame-retardant (fire-rated) regardless of its designated use inside or outside any building.

Poly sheeting utilized for worker decontamination enclosure shall be opaque white or black in color and each layer shall be a minimum of 6 mil thick. Modesty barriers are to be erected whenever and wherever the Owner's CAC determines one is needed.

Disposal bags shall be constructed of 6 mil poly with labels required by OSHA, CDPH, Toxic Substance Control regulations. Disposal drums shall be metal or fiber board with locking ring tops to be used only if required and/or allowed by selected waste facility.

Stick-on labels as per DTSC, DOT and OSHA requirements for disposal drums shall be provided.

Warning signs as required by OSHA shall be provided and posted per regulations.

Surfactant (wetting agent) shall be a 50/50 mixture of polyoxyethylene ether and polyoxyethylene ester, or equivalent, mixed in a proportion of one (1) fluid ounce to five (5) gallons of water or as specified by manufacturer. If amphibole asbestos in present in the materials being removed, the Contractor shall use a surfactant that is designed to wet the materials. This information shall be submitted to the Owner's CAC before the start of the project.

A sufficient quantity of pressure differential units equipped with HEPA filtration and operated in accordance with ANSI Z9.2-79 and EPA guidance document EPA 560/5-83-002 Guidance for Controlling Friable Asbestos-Containing Materials in Buildings, Appendix F: Recommended Specifications and Operating Procedures for the Use of Negative Pressure Systems for Asbestos Abatement, shall be utilized so as to meet the requirements of Section 12.

An adequate number of respirators for the work force shall be on hand. These respirators will include, when specified:

a. Type "C" air-supplied respirators in positive pressure or pressure demand mode with full face pieces and HEPA-filtered disconnects.

b. Full-face powered-air respirators with HEPA-filters.

c. Half-face or full face respirators with HEPA filters.

All respirators shall be NIOSH-approved and be equipped with supplies for immediate replacement of defective parts.

Full body disposable protective clothing, including head, body, and foot coverings consisting of material impenetrable by asbestos fibers shall be provided to all workers and authorized visitors in sizes adequate to accommodate movement without tearing.

Additional safety equipment such as hard hats, eye protection, safety shoes, disposable PVC gloves, etc., as necessary shall be provided to all workers and authorized visitors.

Non-skid footwear shall be provided to all abatement workers.

If launderable clothing is to be worn underneath disposable protective clothing, it shall be provided by the Contractor to all abatement workers. Laundering must occur in accordance with applicable OSHA requirements.

A sufficient supply of scaffolds, ladders, lifts and hand tools (e.g., scrapers, wire cutters, brushes, utility knives, wire saws, etc.) shall be provided as needed.

Rubber dustpans and rubber squeegees shall be provided for cleanup.

A sufficient supply of HEPA-filtered vacuums and HEPA filtered negative air units shall be provided to meet the specifications.

All HEPA equipment to be used on the project must be delivered to the site empty of all debris, clean, free of dust, and in full operating condition. All HEPA equipment to be used shall be DOP tested onsite by a third party at the start of the project before being used on the project. This DOP certification must be verified by Owner's CAC prior to its use.

DOP certification testing shall be observed and witnessed by an Owner's CAC. Copies of DOP test results and certification must be submitted to Owner's CAC within 24 hours of the testing being performed.

No product or material will be used on the project unless the product data sheets and all SDS's have been submitted, reviewed, and approved by the Owner for use. Any product or material found on the project which has a product data sheet and/or SDS available and has not been approved will be removed from the site by the Contractor until review and approval has been completed by the Owner.

Part 7.2 - Rental Equipment and Supplies

Any equipment rented and delivered to the site for the purpose of conducts asbestos abatement work must be accompanied with documentation verifying that the rental agency has been notified, and acknowledges receipt of notification that the equipment being rented will be used for asbestos abatement work. This documentation must be submitted to the Owner's CAC prior to the equipment being delivered to the job site.

Rental equipment, including scaffolding, will be held to the same standard of cleanliness as all other equipment on this project.

All rented equipment must be inspected and accepted by Owner's CAC as it arrives onsite. Any equipment covered with dust (no matter the source of dust), plaster debris, multiple layers of encapsulant and/or spray glue, or any other debris will not be accepted. Delays caused by a lack of clean equipment will not extend Contractor's schedule. Equipment rejected due to a lack of cleanliness must be removed from Owner's grounds in order to be cleaned. Dirty equipment wrapped in plastic will not be acceptable.

The Owners' agent/site representative must be informed 24 hours prior to the delivery of any rental equipment.

The decision of the Owner or its representative on all rental equipment and supplies shall be final.

SECTION 8. WORK SITE FACILITIES

The Owner shall provide sanitary facilities for abatement personnel outside of the enclosed work area. To use these facilities all workers shall wear street clothes, not bathing suits or disposable coverall while using the facilities.

The Owner shall provide water for construction purposes. Contractor shall connect to existing Owner system.

The Owner shall provide the electrical source.

The Owner or its representative shall specify the waste water discharge location and location of waste containers.

The Owner shall specify on-site parking areas, if available, and access to the site.

SECTION 9. RESPIRATORY PROTECTION

All respiratory protection shall be provided to workers in accordance with the submitted written respiratory protection program, which includes all items as required by OSHA. This program shall be posted in the clean room of the worker decontamination enclosure system or adjacent to the clean room.

The Contractor shall ensure that all workers entering the regulated area wear appropriate respiratory protection. Respiratory protection provided workers shall be in accordance with 8 CCR 1529, and 8 CCR 5144 and the respiratory protection program submitted by the Contractor. This program shall be available at the project site.

The Owner or their representative may deny access to a regulated area to anyone who, in the final judgement of the Owner or their representative, is not properly wearing adequate respiratory protection for the project conditions. This includes but is not limited to those wearing unidentified respirators, those with improperly sealed respirators, those wearing respirators in an improper manner such as over their protective suit hood, or in any other fashion judged by the Owner or their representative to be improper or inadequate to protect the individual from the airborne asbestos at the project site.

The Contractor shall provide each worker needing respiratory protection with his or her own, individually identified, NIOSH-approved respirator. At a minimum, these respirators will be equipped with a P-100 series HEPA filter. The Contractor shall provide additional filter types if that becomes necessary for specific hazards discovered on the job site or if required in the contract documents.

The Contractor shall ensure that all workers use the respirator in compliance with the manufacturer's instructions for proper use and care of that product.

Workers must perform positive and negative respirator seal checks each time a respirator is put on, provided the respirator design so permits.

The Contractor shall ensure that those workers wearing powered air purifying respirators test the air flow rate according to the frequency and methods specified by the manufacturer.

Workers shall be given, at least, a qualitative fit test in accordance with procedures detailed in the Cal/OSHA requirements for all respirators to be used on this abatement project. An appropriately administered quantitative fit test may be substituted for the qualitative fit test.

The Contractor shall ensure and provide written records to the Owner's CAC that all workers wearing tight-fitting respirators have been appropriately fit tested in accordance with the requirements of 8 CCR 5144.

The Contractor shall ensure that nothing interferes with the seal of the respirator to the face of the worker. This includes but is not limited to facial hair, clothing, protective clothing, equipment or anything else that comes between the respirator and the face of the worker.

Use of any respirator must be in compliance with the manufacturer's instructions for proper use and care of that product.

The Contractor shall ensure that workers wear respirators underneath protective clothing.

Workers conducts any work that may create an airborne release of asbestos must wear appropriate respiratory protection. This includes, but is not limited to the pre-cleaning of asbestos contamination off of furniture, equipment and floors, and the set-up of contaminated work areas.

The judgement of the Owner's CAC shall be final if there is a disagreement between the Owner and the Contractor regarding the need for wearing or the type of personal protection required..

In no event will a negative exposure assessment be allowed to lower respiratory protection, from that listed in the Scope of Work or required by regulation in the absence of an NEA, prior to the start of a project. Air samples used for negative exposure assessments created after the project has started must be from work conducted under this contract.

Minimum Respiratory Protection for OSHA Class I Work
All Class I asbestos work will require tight-fitting, full-face powered-air purifying respirators pursuant to Title 8 1529.

Unless stated otherwise in the contract documents, for the purposes of respiratory protection, Class I work will include the removal of materials such as gypsum board surfaces that are covered with a texturing or skim coat material that contains >1% asbestos.

Minimum Respiratory Protection for Class II and III Work Practices
Unless specified differently in the contract documents, the Contractor's employees conducts Class II or III work will wear a minimum of half-face air-purifying respirators. Contract documents may require additional respiratory protection, such as the use of full face air-purifying respirators or powered air purifying respirators.

After work has begun, if a Contractor wishes to lower respiratory protection requirements, he or she must demonstrate to the Owner's CAC that personal air sampling results from that project prove that airborne fibers levels are below the limit of quantification for the phase contrast microscopy method. The Owner's CAC will

normally require sampling results used for this purpose to include several days of sampling taken during the work expected to generate the highest expected airborne levels. The Owner's CAC will have final authority regarding whether or not the respiratory protection may be reduced or eliminated. For example, the Owner's CAC may require personal samples be analyzed by TEM before determining that asbestos does not pose an airborne health risk.

All Class I work shall require full-face powered air purifying respirators and are not subject to a reduced level of respiratory protection regardless of the air sample results.

The Owner's CAC has full authority to raise the level of respiratory protection required for access to the regulated area if in his or her judgement additional respiratory protection is required. For example, if personal air sample results collected by either the Contractor or Owner's CAC indicate higher than expected levels, the Owner's CAC is authorized to increase the level of required respiratory protection. The Owner's CAC will determine if the increased respiratory protection is due to new, unexpected developments such as the discovery of new materials, or if the increase is due to the Contractor failing to follow good work practices. The judgement on this matter by the Owner's CAC will be final.

The Owner is not responsible for increased costs or delays resulting from the need to increase respiratory protection should the reason for the increased respiratory protection be due to the Contractor's failure to adequately utilize good engineering controls and work practices and/or the prompt cleanup of debris.

The Contractor may only implement respiratory protection changes after receiving written approval for the change from the Owner's CAC.

Powered-air purifying respirators must be worn if waste containers spill, break, or in any other fashion require a Class I work cleanup be performed.

The Contractor shall comply with the respiratory protection requirements in 8 CCR 5144 includes assigned protection factors for all respirators. The following list of respirators and their assigned "protection factors" shall be the criteria for the selection of respiratory protection.

Respirator Selection	Protection Factor
Half-face or full-face air purifying respirator equipped with HEPA filter.	10
Full-face air purifying respirator equipped with HEPA filter with quantitative fit test.	50
Full-face Type C continuous flow supplied air.	1000
Full-face, powered air purifying respirator equipped with HEPA filter.	1000
Full-face supplied air respirator operated in pressure demand mode.	1000
Full-face supplied air respirator operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus.	1000

Workers shall be provided respirators equipped with HEPA filters approved by NIOSH to be worn in the designated work area and/or whenever a potential exposure to asbestos exists. Owner or its representative may refuse entry to the work area to a worker with inappropriate respiratory protection.

Sufficient filters shall be provided for replacement as required by the workers or applicable regulations. Disposable respirators shall not be used.

Whenever type C respirator protection is used, compressed air systems shall be designed to provide air volumes and pressures to accommodate respirator manufacturer specifications. The compressed air system shall have a reservoir of adequate capacity to allow the escape of all respirator wearers from contaminated areas in the event of compressor failure.

Compressors must meet the requirements of 29 CFR 1910.134(d). Location of compressors must be approved by Owner for exhaust and noise considerations. Location of compressors must be approved by Owner for exhaust and noise considerations.

Compressors must have an in-line carbon monoxide monitor and periodic inspection of carbon monoxide monitors must be documented. Documentation of adequacy of compressed air systems/respiratory protection systems must be retained on site. This documentation will include a list of compatible components with the maximum number and type of respirators that may be used with the system. Periodic testing of compressed air shall insure that systems provide air of sufficient quality (Grade D breathing air). Documentation of this testing, including a description of the process used to perform the test and results of each test must be submitted to the Owner's CAC weekly.

Whenever powered air-purifying respirators are required, a sufficient supply of replacement batteries and HEPA filter cartridges shall be provided to the workers. Spare fully charged batteries must be available on-site for replacement. The flow rate delivered to the face piece shall be checked and recorded by the Contractor on the sheet provided by the Owner's CAC each time a worker dons the respirator. Written respiratory protection program must detail how this testing is to be performed by each employee or the onsite supervisor. The Contractor shall ensure that the flow rate for PAPRs meets the requirements listed in 8 CCR 1544 regarding tight and loose fitting respirators as appropriate. The Contractors shall also ensure that PAPRs are worn, checked and maintained according to the directions of the manufacturer.

During encapsulation operations or usage of other organic base aerosols (e.g. spray glue, expanding foam,

etc.) workers shall be provided with combination organic vapor/HEPA filter respirator cartridges.

SECTION 10. PERSONNEL PROTECTION REQUIREMENT AND TRAINING

Prior to commencement of abatement activities all personnel who will be required to enter the work area or handle containerized asbestos containing materials must have received adequate training in accordance with the OSHA, EPA AHERA, EPA NESHAP and DTSC regulations.

All personnel performing asbestos related work shall possess a current accreditation certificate as an asbestos worker or contractor/supervisor as described in 40 CFR Part 763, Appendix C to subpart E, Asbestos Model Accreditation Plan.

Special on-site training on equipment and procedures unique to this job site shall be performed by the Contractor as required or recommended by the equipment manufacturer.

The Contractor shall provide training in emergency response and evacuation procedures.

Disposable clothing, including head, foot and full body protection, shall be provided in sufficient quantities and adequate sizes for all workers and authorized visitors. Damaged coveralls shall be immediately repaired or replaced.

Hard hats, protective eye-wear, safety shoes, proper protective gloves, rubber boots and/or other footwear shall be provided by the Contractor as required for workers and authorized visitors.

Contractor personnel shall not wear street clothes or clothes of any type underneath the protective disposable clothing during any Class I work where showering is required. Upon exiting the work area, no items worn in the work area, such as clothing, personal protective gear, footwear, or hair coverings will be allowed to be worn past the shower of the decontamination unit. Contractor workers have the option of wearing disposable undergarments or a bathing suit underneath protective disposable clothing.

Each time the worker(s) enter the work area they will don new disposable clothing. Street clothes, including but not limited to, underwear and street shoes shall not be allowed inside the work area, except during visual clearance activities.

The Owner’s CAC may use personal judgement to allow authorized personal to wear street clothes under protective clothing during the construction of final visual or other short-duration visits into the regulated area during times which asbestos is not being disturbed and gross debris is not present.

SECTION 11. WORKER DECONTAMINATION ENCLOSURE SYSTEMS

Worker decontamination enclosure systems shall be provided at all locations where workers will enter or exit the work area. Enclosure systems may be constructed out of metal, wood or plastic support as appropriate. Plans for construction, including materials and layout, shall be submitted as shop drawings and approved, in writing, by the Owner or its representative prior to work initiation. Detailed descriptions of portable, prefabricated units, if used, must be submitted for the Owner's approval. The worker decontamination enclosure system shall consist of at least a clean room, a shower room, and an equipment room and shall be constructed with at least 6 mil fire rated plastic sheeting.

All decontamination units and pressure differential units located outside the building shall be enclosed with a 2"x 4" wood studs and ½" plywood enclosure for security. Pressure differential units shall be secured as necessary to the building or ground. Exhaust openings shall have metal grates to prevent objects from being

put into the exhaust openings. Pressure differential exhaust shall be exhausted to an area acceptable to the Owner or Owner's CAC.

Entry and exit from the worker decontamination enclosure system shall be through doorways designed to restrict air movement between chambers when not in use by either means of overlapping plastic or by means of zippers. In all hospital settings, only zippered doors are acceptable between all decontamination chambers or anterooms. The dirty side shall have an extra layer of 6 mil poly sheeting on the floor as a "boat layer" and it shall be replaced at least daily.

The clean room shall designed and sized and equipped to adequately accommodate the size of the work crew for their change of clothes, cleaning supplies and respiratory protection equipment. Lighting, heat and electricity shall be provided as necessary for comfort. The clean room space shall not be used for storage of tools, equipment or materials or as office space.

A shower is required on any project that involves removal of greater than 25 linear feet of asbestos containing TSI or greater than 10 square feet of asbestos containing surfacing material. In addition, if the scope of works dictates a shower these provisions shall also apply. The shower room shall contain one or more showers as necessary to adequately accommodate workers. The shower enclosure shall be constructed to ensure against leakage of any kind. In addition, the shower shall be a separate unit from the decontamination unit walls. The shower unit cannot be made from poly. Metal or hard plastic is acceptable. An adequate supply of soap, shampoo and towels shall be supplied by the Contractor and available at all times for use by employees. Shower water shall be drained, collected and filtered through a system with at least 5.0 micron particle size collection capability.

The shower pan in the shower chamber shall be, at least, 3' x 3' in size. The shower chamber shall be constructed so that no water from the shower can spray out of the chamber, nor any water run down the sides of the poly and miss the pan. The shower chamber dimensions shall be determined by the size of the shower pan but are not to be smaller than 3' wide by 3' long by 6' tall.

Multiple showers are required if the number of asbestos workers exceeds ten per Title 8 3366 Washing Facilities. When there are less than five employees, the same shower may be used by both sexes if the shower room can be locked from the inside. A minimum of two showers will be required for more than 10 workers.

Each decontamination chamber shall have, at least, a 4" lip of poly from the floor up the wall to prevent possible transfer of water and debris between chambers. Excess poly at the corners of this floor is to be fitted to the sides of the chamber by folding poly and taping, as opposed to cutting away excess poly and taping seams. In addition to this 4" lip of poly, the shower chamber shall have an overflow pan, in which the shower unit sits inside, that is capable of holding sufficient water in the event of an overflow. The filter system and any hose connections transferring contaminated water shall be located in a secondary containment, such as a metal pan. Any water leakage shall be collected and either filtered or placed into waste bags with other asbestos waste debris.

Unless otherwise specified in the scope of work, the minimum size of the decontamination chambers shall be the following:

Clean Room	3' x 3'
Shower	3' x 3'
Dirty Room	3' x 3'

Abatement work will be stopped if decontamination unit is not kept in acceptable condition.

Storage or consumption of food and/or beverages shall not be permitted inside the containment or within any

of the decontamination chambers. Food or drink consumption within containment will result in the dismissal of the worker from the site.

Whenever and wherever possible, the Contractor shall enclose multiple rooms within a building or wing into a single containment. Where rooms are joined by a common interior hallway or have a common exterior walkway, multiple spaces shall be joined together creating one containment using poly enclosures. When multiple rooms in a building do not have a common interior hallway, multiple rooms shall be joined using a common work chamber built by the Contractor. The common work chamber shall be constructed of wood studs and plywood sheeting for security purposes, and shall be part of the decontamination chamber. Decontamination units and joined “common areas” outside of a building shall have lockable doors or gates created with temporary fencing for security during off-hours.

SECTION 12. WORKPLACE ENTRY AND EXIT PROCEDURES

All workers and authorized personnel shall enter the work area through the worker decontamination enclosure system.

All personnel who enter the work area must sign the entry log, located in the clean room. This log shall have space for the workers name, time in, time out, and be identified with the project name, date, and containment location.

All personnel, before entering the work area, shall read and be familiar with all posted regulations, personal protection requirements, workplace entry and exit procedures, and emergency procedures.

For Class I work, the worker shall proceed first to the clean room and remove all street clothes and don appropriate respiratory protection and disposable coveralls, head covering and foot covering. Hard hats, eye protection and gloves shall also be worn, as appropriate. Clean respirators and protective clothing shall be provided and utilized by each person for <u>each</u> <u>separate</u> <u>entry</u> into the work area. There shall be a location for storage of the street clothes in the clean room.

Personnel wearing designated personal protective equipment shall proceed from the clean room through the shower room and equipment room to the main work area.

Before leaving the work area all personnel shall remove gross contamination from the outside of respirators and protective clothing by brushing and/or wet-wiping procedures. HEPA vacuums with brush attachments may be utilized for this purpose.

The worker shall proceed into equipment room where they remove all protective equipment except respirators. Deposit disposable clothing into an appropriately labeled container for disposal.

Reusable, contaminated footwear such as rubber boots shall be stored in the equipment room when not in use in the work area. This footwear shall be cleaned prior to being removed from the work area. Placing footwear in two sealed 6 mil poly bags is sufficient for moving from one containment to another, but not for moving from one site to another.

Still wearing respirators, personnel shall proceed into the shower area, clean the outside of the respirators and the exposed face area under running water prior to removal of respirator, then shower and shampoo to remove residual asbestos contamination. Various types of respirators will require slight modification of these procedures.

After showering, proceed to the clean room to dry and put on the street clothes.

SECTION 13. DIFFERENTIAL AIR PRESSURE SYSTEMS

Part 13.1 - Negative Pressure Requirements

Negative pressure shall be maintained at 0.030" water differential at all times during abatement activities, including entry/exit and bag out procedures. Contractor shall assign crew members to determine cause of loss of pressure any time containment's negative pressure drops below 0.030" water differential. All work will be stopped in any containment for which the negative pressure drops below 0.025" water differential, until problem is resolved and pressure returns to 0.030" water differential or better.

In the event that containment cannot be brought up to 0.030" water differential, abatement contractor must increase number of negative pressure differential units until a calculated 10 air changes per hour is taking place. The Owner's CAC will assist and review possible remedies to the negative pressure requirement.

All negative pressure units that are installed to the containment system but are shut off or not working, shall be sealed at both the exhaust location and the intake of the machine to prevent back draft which could allow asbestos fiber contamination from the HEPA filter back into the work area.

Part 13.2 - DOP Testing

Contractor shall provide differential air pressure systems for each work area in accordance with Appendix J of EPA "Guidance for Controlling Asbestos-Containing Materials in Buildings," EPA 560/5-85-024.

All HEPA filtered systems used on this project shall be tested and certified by an independent third party company on-site prior to use. Contractors may not test their own equipment. All vacuums and pressure differential units shall meet ANSI Z9.2, using an appropriate testing agent. Written copies or electronic copies of documentation of these tests shall be provided to the Owner's CAC prior to the use of any HEPA system.

DOP, or equivalent, testing shall be conducted on-site, unless stated otherwise in the Scope of Work. All HEPA filtered units, including but not limited to, vacuums and air pressure differential units (negative air units) shall be tested onsite. Testing of air pressure differential units must include testing of the wheel attachments, control panel, seam, rivets of the housing, as well as, the HEPA filter itself.

All HEPA equipped equipment to be used on the project must be delivered to the site empty of all debris, clean and free of dust, and in full operating condition. Covering dirty units with poly, other than the HEPA filter surface, will not be acceptable.

DOP or equivalent testing is required when any HEPA filters are changed during the project

Any negative pressure unit turned upside down, or on its side, must be returned to an upright position and re-DOP tested. Negative pressure units shall not be used on this project while laid on their side or upside down.

In case of a power outage, Contractor must seal exhaust ducts against back draft into containment.

All negative air units shall will have the filter sealed with poly and tape before being shutdown to prevent back drafting before it is moved from the work area.

Part 13.3 - Differential Pressure Recording Requirements

Differential air pressure shall be continuously monitored by using a manometer that measures down to at least three digits to the right of the decimal point. For example, the manometer shall be able to read and display -0.035" wp, which shows three digits to the right of the decimal point. Other manometers not meeting this minimum criteria are not acceptable. The location of the pressure measurement shall be approved in advance

by the Owner's CAC. The location where the air tubing of the manometer is inserted into the work area will be determined by both the contractor competent person and the Owner's CAC.

The pressure differential shall be checked a minimum of every hour during the work shift by the contractor's competent person.

On some projects, it may be specified for the manometer to maintain a printed copy of the negative pressure readings. The manometer readings will require the correct date and time. It will be the contractors responsibility to write on the recording information the location of the reading, including project name and containment location.

Defective or non-operating manometers may require temporary stoppage of work until instrumentation is replaced.

For larger projects at least one manometer station shall be in place for each 25,000 square feet of containment space. Additional manometers may be required on large projects, where a second location is needed for the Owner and representatives.

Part 13.4 - Differential Pressure System

The location of the air filtration units (negative air units) exhaust out of the work area shall require careful consideration with regard to the work being performed and needs of the owner. All air exhaust from negative air units shall be directed out of the building when possible. This can be accomplished through use of flexible and semi-rigid exhaust ducts from the negative air units extending to windows, doors or other openings in the building. The first choice should always be to direct PDU air exhaust out of the building through the Contractor supplied ducts. Any alternative exhaust location of negative air that cannot exhaust out the building shall be determined by the Owner's CAC.

When directing exhaust to a buildings exterior through the use of temporary supplied duct, the Contractor shall select a path of travel for these ducts which does not impede building occupants or other trades, result in creation of a hazard to building occupants, or restrict the closing of entry and exit doors to the building. The exhaust opening must not be within 10' of any air intake vents, open windows or open doors, and must not be directed at paths of travel into or out of the building.

In some very limited cases, it might be possible to exhaust air from a negative air unit into an existing building's exhaust system. When utilizing a dedicated exhaust duct system present within the building the system must be investigated to determine its capability of handling the volume of exhaust air expected to be produced by the pressure differential system. Sufficient air volume of the existing dedicated exhaust duct system should have a minimum of 5X but preferably up to about 10X the total volume capacity of the exhaust of the pressure differential air system. For example, if a single 2,000 cfm negative air unit is to be used, the dedicated exhaust fan system which will exhaust the air produced by the negative air unit should be capable of handling about 10,000 cfm of total exhaust air capacity. Use of permanent dedicated exhaust duct systems may also require temporarily sealing of adjacent registers in the same exhaust system to make up the difference in exhaust volume.

The owner shall provide approval prior to the contractor utilizing any existing dedicated exhaust systems which might be considered, since the dedicated exhaust systems will be required to operate at all times the pressure differential air system is operable, and sealing any adjacent registers may not be acceptable. It is critical to note that a dedicated exhaust system is not the same as a return air duct system which re-circulates air from a given building space back to the HVAC fan unit and ultimately is supplied back to the work space. Return air duct systems will not be allowed for exhaust from negative air units.

Directing exhaust air into an attic or above ceiling space may only be utilized in specific conditions and is

limited to attic spaces with only exposed wood, metal or concrete undersides of roof or flooring systems. The space may not under any circumstances have any existing known or assumed asbestos containing materials present regardless of their condition.

Regardless of the exhaust system utilized, the system and its components shall be inspected daily by the Contractor to ensure compliance with the requirements of this specification, remains in good repair and is otherwise not compromised in any way which could negate its designed purpose. Any deficiencies found in the system being used shall be repaired immediately and if necessary all work will cease until those repairs can be accomplished.

The work area shall have a differential air pressure of at least -0.030 inches water whenever the work is being performed including removal, gross clean-up, encapsulation of surfaces, bag-out operations and worker entry and exit procedures. If pressure differential ever drops below -0.025 inches water differential, all work, other than cleanup of waste on the floor of containment, must be halted until reason for pressure differential drop has been determined and corrected.

Only unused pre-manufactured, reinforced flexible ducts shall be used within the containment area for exhausting of filtered air. Contractor may not construct ducts using poly or other materials that do not maintain the rigidity in the exhaust duct.

All interior of containment PDU's and flexible ducts must be wrapped in poly during all abatement activities. This poly wrap is to be removed after "finish detail" work has been completed, but prior to clearance visual.

Flexible ducts must be supported by solid surface at the point of exit from containment. This may require the Contractor to install plywood, or similar, structure at the exhaust point.

SECTION 14. EXECUTION, WORK SCHEDULE

Part 14.1 - Execution

Owner Responsibilities

The Owner shall provide the Contractor with access to the building during scheduled work hours through their representative. This representative is expected to be the General Contractor in charge of the site. The Owner shall also be responsible for arming and disarming alarm systems on buildings where work will be performed.

The Owner shall also provide the Contractor access to water and electrical hook-ups.

Contractor Responsibilities

The Contractor is responsible for all connections, electrical cords, GFCI's, water hoses, and hose bibs necessary for attachment. GFCI's are required to be used by the Contractor on all electrical circuits in use.

The Contractor and Owner's CAC shall investigate the work area and agree (in writing if necessary) on the pre-abatement condition of the work area.

The Contractor shall post danger signs meeting the OSHA specifications at locations and approaches to locations where airborne concentrations of asbestos may exceed ambient background levels including all doors sealed as a critical barrier and at all entries to asbestos work containments.

When electrical supply within area of abatement poses a hazard, the Contractor, in conjunction with the Owner, shall shut down and lock out electric power to all work areas. The Contractor shall provide temporary power and lighting sources, ensure safe installation, including ground fault circuit interrupters of temporary power sources and equipment by complying with all applicable electrical code requirements and OSHA requirements for temporary electrical systems. The Contractor shall have a licensed electrician shut down and lock out electric power, and setup temporary power and lighting sources. All cost of electricity shall be paid for by the Owner unless specified differently in the Scope of Work. The cost for set-up of temporary power is the responsibility of the abatement contractor unless specified differently in the scope of work.

When plumbing is required to be altered or becomes damaged, the Contractor shall have a licensed plumber disconnect and cap all water as necessary within the work area. Water shall be provided by the Owner from a location near the work area, but not necessarily within the work area.

Shut down and lock out all heating, ventilating and air-conditioning-system (HVAC) components that are in, supply, or pass through the work area. Seal all intake and exhaust vents in the work area with tape and 6-mil polyethylene within the work area at both the interior and on the exterior of the building. Seal any seams in system components that pass through the work area.

Pre-clean all fixed objects in all work areas using HEPA-filtered vacuums and/or wet-cleaning techniques as appropriate and deemed necessary by the Owner's CAC. Careful attention must be paid to machinery behind grills or gratings where access may be difficult but contamination significant. After pre-cleaning, enclose fixed objects in 6-mil polyethylene sheeting and seal securely in place with tape.

Pre-clean all surfaces in all work areas using HEPA filtered vacuums and/or wet cleaning methods as appropriate. Do not disturb asbestos-containing materials during the pre-cleaning phase.

Unless otherwise stated in the scope of work or by agreement with the Owner's CAC all non-asbestos-containing materials left in the work area shall be covered by with 6-mil polyethylene sheeting. If any non-asbestos containing materials become contaminated with asbestos during removal activities these materials shall be disposed of as asbestos-containing materials by the Contractor. The Owner's CAC shall determine the friability of these materials prior to disposal.

Contractor shall seal all windows, doorways, elevator openings, corridor entrances, drains, ducts, grills, grates, diffusers, skylights and other openings between the work area and uncontaminated areas outside of the work area. These openings must be sealed with 6-mil polyethylene sheeting and tape. These protective layers shall be in addition to the two polyethylene layers on floors, ceilings and walls. These openings are referred to as critical barriers. Seal all cracks in critical barrier areas with tape, caulk, or foam prior to sealing critical barriers.

Prior to the Contractor covering critical barriers with additional layers of wall, floor, or ceiling poly, the installation and integrity of critical barrier seals must be approved by the Owner's CAC.

All items attached to asbestos-containing materials and items which cannot be removed without disturbing asbestos-containing materials shall be removed by the Contractor after establishment of containment and negative pressure. If these items are to be "saved and returned" or "reused" by the Owner, the Contractor must remove and clean them without damage. These items must be cataloged using the attached "Return Item Inventory Sheet" provided by the Owner.

Contractor shall cover floors in the work area with polyethylene sheeting. Floors shall be covered with a minimum of two layers of 6-mil polyethylene sheeting. Plastic shall be sized to minimize seams. A distance of at least six (6) feet between seams is sufficient. DO NOT locate any seams at wall/floor joints. Floor sheeting shall extend at least twelve inches (12") up the sidewalls of the work area. Sheeting shall be installed in a fashion so as to prevent slippage between successive layers of material. A layer of 10-mil polyethylene sheeting and/or plywood may be required by the Owner's CAC to protect certain flooring materials -- carpets, hardwood floors, tiles, etc. and will be specified in the scope of work if required. At no time will wall or ceiling materials be permitted to be dropped onto unprotected floors. This includes areas where the floor surfaces contain asbestos.

Contractor shall cover walls in the work area with polyethylene sheeting. Walls shall be covered with a minimum of two layers of 4-mil polyethylene sheeting. Plastic shall be sized to minimize seams. Seams shall be staggered and separated by a distance of at least six feet (6'). DO NOT locate any seams at wall/floor joints. Wall sheeting shall overlap floor sheeting by at least twelve inches (12") beyond the wall/floor joint to provide a better seal against water damage and for pressure differential maintenance. Wall sheeting shall be secured adequately to prevent it from falling away from the walls. This may require additional support/attachment when pressure differential systems are utilized.

In some projects when specified in the scope of work, the Contractor shall cover ceilings in the work area with polyethylene sheeting. Ceilings shall be covered with a minimum of one layer of 4 mil polyethylene sheeting. Plastic shall be sized to minimize seams. Seams shall be staggered and separated by a distance of at least six feet (6'). DO NOT locate seams at wall/ceiling joints. Ceiling sheeting shall overlap wall sheeting by at least twelve inches (12") beyond the ceiling/wall joint to provide a better seal against water damage and for pressure differential maintenance. Ceiling sheeting shall be secured adequately to prevent it from falling away from the walls such as wires attached between walls to provide additional support. Additional support/attachment might be required when pressure differential systems are utilized.

The Contractor shall add clear viewing windows in the containment walls at least 1' x 2' in size. The Owner's CAC will approve quantity and placement of these inspection windows. The Owner's CAC has the right to require more clear viewing windows or require placement of windows to be altered.

The equipment room shall be used for storage of equipment and tools at the end of a shift after they have been decontaminated using a HEPA-filtered vacuum and/or wet-cleaning techniques as appropriate. A six-mil. disposal bag or a drum lined with a labeled 6-mil polyethylene bag for collection of disposable clothing and contaminated supplies shall be located in this room.

The Contractor shall be responsible for all clean-up and costs associated with the decontamination of occupied spaces adjacent to any containment where removal of asbestos-containing material is conducted.

The Contractor shall also be responsible for damage to building finishes and costs associated with removal of tape glue, staining of wall finishes, or destruction of wall surface integrity from spray glue application, staples, nails, hooks, etc. installed to support containment. It is the responsibility of the Contractor to identify with the General Contractor all aspects of the project requirements pertaining to these types of damages.

There shall be a sufficient number of negative air units in the work area to maintain a minimum -0.030 " water pressure in the regulated area. A sufficient number of negative air units shall be installed to maintain a minimum of four air changes per hour. All negative air units shall have pre-filters at the intake of the system which must be changeable from inside the containment area. Openings made in the enclosure system to accommodate these units shall be made airtight with tape and/or caulking as needed. They shall NOT be exhausted into occupied areas of the building. Twelve inch (12") extension ducts shall be used to reach from the work area to the outside when required. Careful installation, air monitoring and daily inspections shall be done to ensure that the ducts does not release fibers into uncontaminated building areas.

Once the containment has been constructed and reinforced as necessary with pressure differential units in operation as required, the Contractor shall test the enclosure for leakage utilizing smoke tubes. The containment shall be repaired or reconstructed as needed.

Contractor shall clearly identify and maintain emergency and fire exits from the work area.

Work shall not begin each day until:

a. Enclosure systems, or modifications thereof, have been designed and built by the Contractor and each step approved by the CAC. If design of containment is to be altered in any way, after it is approved by the CAC, a written explanation of how and why the containment is to be altered must be submitted to the Owner's CAC for approval.
b. Pressure-differential systems are functioning according to an acceptable design.
c. All pre-abatement submissions, notifications, postings and permits have been provided and are satisfactory to the Owner or its representative.
d. All equipment for abatement, clean-up and disposal is on hand.
e. All current worker training documents are present.
f. The Contractor has installed all required clear transparent viewing windows made of plastic or equivalent, in the containment so that activities can be visually monitored by the Owner's CAC from outside the containment. This window shall measure approximately 1' wide by 2' high. It shall be installed at a location approved by the Owner's CAC.
g. All negative air units and vacuums have received and passed onsite DOP testing.
h. Contractor has at least one competent person at each site in which work is taking place.
I. All necessary documents and information have been posted or are on the work site. See Section 2.

Part 14.2 - Power Outage Procedures

The following procedures shall be followed in the event of a power outage (no matter the source of the outage):

1. Immediately stop abatement activities.
2. Wet all debris and/or friable materials within the containment.
3. Depart containment area as soon as reasonable. Shower out or use Hudson type water sprayers to decontaminate worker if shower is inoperable due to power outage.
4. Seal containment area including:

    A. Decontamination units
    B. Makeup air ports
    C. Bag out chambers

If a generator is required by the project conditions, made necessary due to extended power outages, or chosen to be used by the abatement contractor the following issues must be addressed:

1. Generator must not violate any local noise ordinances nor disturb adjacent building occupants.
2. Generator exhaust must not be allowed to contaminate the makeup air being pulled into the containment. It must, also, not be allowed to mix with HVAC air supplied to adjacent occupied buildings.

Part 14.3 - Work Schedule

Contractor shall schedule work as required to meet the needs of the project. During progress of work, it shall be the Contractor's responsibility to inform the Owner's CAC 48 hours or earlier of any and all work shifts to be performed. If at least 48 hours notice is not given, the proposed work shift may be canceled by the Owner's CAC.

Contractor shall be responsible for informing the Owner's CAC in writing at least 48 hours or earlier prior to the proposed addition of any off hours work, work expected to include more than one shift per day, or extend beyond 10 hours in a shift. If 48 hours notice is not given, work shift may be canceled by the Owner's CAC. The Owner's CAC reserves the right to deny any changes in the work schedule.

If the Contractor wishes to work on a Federal or State holiday, more than five days a week, or more than 9 hours a day, Contractor becomes responsible for cost of project management fees to cover extended hours. If the Contractor fails to appear on-site without notifying Owner's CAC at least 24 hours in advance of a scheduled work shift, the Contractor becomes responsible for all Owner's CAC travel fees, on-site time fees, and other associated project management fees for that day.

At no time shall a work shift extend beyond 12 hours in a day.

SECTION 15. REMOVAL PROCEDURES

Wet all asbestos-containing material with an amended water solution using equipment capable of providing a fine spray mist, in order to reduce airborne-fiber concentrations when the material is disturbed. Saturate the material to the substrate; however, do not allow excessive water to accumulate in the work area. Keep all removed material wet enough to prevent fiber release until it can be containerized for disposal. Maintain high humidity in the work area by misting or spraying to assist in fiber settling and reduce airborne concentrations. Wetting procedures are not equally effective on all types of asbestos-containing materials but shall be used in all cases.

Saturated asbestos-containing material shall be removed in manageable sections. Removed material should be containerized immediately. Surrounding areas shall be periodically sprayed and maintained in a wet condition until visible material is cleaned up. Gross debris shall be cleaned up and bagged prior to end of each shift.

Material removed from building structures or components shall not be dropped or thrown to the floor. Material should be removed as intact sections or components whenever possible and carefully lowered to the floor.

Waste containers shall be sealed when full. Double bagging of waste material into 6 mil plastic is required. Bags shall not be overfilled. They should be securely sealed to prevent accidental opening and leakage by tying tops of bags in an overhand knot or by taping in gooseneck fashion. Do not seal bags with wire or cord.

Asbestos-containing waste with sharp-edged components (e.g., nails, screws, metal lath, tin sheeting) will tear the polyethylene bags and sheeting and shall be placed into drums or burlap bags and then into leak tight containers for disposal.

After completion of all stripping work, surfaces from which asbestos-containing materials have been removed shall be wet-brushed and sponged or cleaned by some equivalent method to remove all visible residue.

After the work area has been rendered free of visible residues and verified clean by the CAC, a thin coat of a satisfactory encapsulating agent shall be applied to lock-down non-visible fibers on all surfaces in the work area including structural members, building components and plastic sheeting on walls, floors and covering non-removable items.

SECTION 16. WASTE CONTAINER PASS-OUT PROCEDURES

Asbestos-contaminated waste that has been containerized shall be transported out of the work area through the waste transfer airlock or through an approved pass-out arrangement.

Waste pass-out procedures shall utilize two teams of workers, an "inside" team and an "outside" team. The inside team, wearing appropriate protective clothing and respirators for inside the work area, shall clean the outside, including bottoms, of properly labeled containers (bags, drums, or wrapped components) using HEPA vacuums and wet-wiping techniques and transport them into the waste container pass-out airlock. Provisions for spray cleaning exterior of bags, equipment, and removable items shall be present in the waste pass-out. Waste water from this operation shall be collected and filtered as required through a 5.0 micron filter.

The three-chamber system is utilized in the following manner. Workers inside the work area place the waste in the leak tight waste container, which is usually a 6 mil bag. They then rinse the bag and seal it. They hand it to a worker in the dirty chamber room who inspects the bag and, if it is clean, places it in the second leak tight waste container. The second leak tight waste container is either another bag or a lined rigid-wall container such as a barrel or box. The worker then seals the second container and may attach the proper labeling. The worker places the container in the middle chamber (shower containment). The worker in the clean chamber then reaches in and lifts the container into the clean chamber. The worker inspects it and if not already labeled, attaches the proper labels. The worker then passes the container to the outside worker who transports the container either to the waste transport vehicle or to a holding area. At no time shall z-flaps of transfer system chambers be taped, held or otherwise blocked open. The Contractor must not allow more than one poly airlock doorway to be open at any one time. This prevents a tunnel system and a breakdown in the isolation of the work area. Negative pressure must be maintained during all waste load-out activities.

The contract documents or the Owner's CAC may in allow a one or two chamber system for waste pass out to be used for some projects, as long as the Owner's CAC agrees to the work practice. As with a three-chamber system, in a one or two chamber system, the Contractor may never allow more than one poly air flap doorway to be open at any one time. For example, a one chamber system would function in the following manner. Workers in the work area rinse and seal the initial waste container. They hand the initial container to a worker in the load-out chamber. That worker verifies that the container is clean and then places it into the second container which will be either another bag or lined ridged-wall container depending on the specifications. The load-out worker then seals the container and applies the appropriate labels. The sealed, labeled container is then passed to the outside workers who transport it to the waste transport container or holding area.

The exit from this airlock shall be secured to prevent unauthorized entry.

SECTION 17. CLEAN-UP PROCEDURE

Part 17.1 - Clean-up Procedure

Remove and containerize all visible accumulations of asbestos-containing material and asbestos-

contaminated debris utilizing rubber dust pans and rubber squeegees to move material around. DO NOT use metal shovels to pick up or move accumulated waste. Special care shall be taken to minimize damage to floor sheeting.

Wet-clean all surfaces in the work area using rags, mops and sponges as appropriate. Note: Some HEPA vacuums might not be wet-dry vacuums. To pick up excess water and gross wet debris, a wet-dry shop vacuum with HEPA filter may be used.

Airless sprayers and water hoses shall not be used in a “power washing” fashion on any surfaces unless approval is provided by the CAC.

The Contractor shall remove each cleaned layer of polyethylene sheeting from walls and floors. Windows, doors, HVAC system vents and all other critical barriers shall remain sealed. The pressure differential units shall remain in continuous operation. Decontamination enclosure systems shall remain in place and be utilized.

Remove all containerized waste from the work area. Decontaminate all tools and equipment and remove at the appropriate time in the cleaning sequence.

Contractor shall clean work area and conduct a pre-clearance visual. Once pre-visual has been passed by the Contractor, the containment shall allow time for the airborne dust to settle within containment for 24 hours, then return and re-clean by HEPA-vacuuming and/or wet-cleaning all objects and surfaces in the work area again. At this point Owner’s CAC will conduct the final visual. If the final visual inspection fails, the Contractor must re-clean area the work area until a final visual inspection is found acceptable to the CAC. Once the final visual inspection is passed by the CAC, Contractor will be allowed to encapsulate the containment area, unless encapsulation of containment has been disallowed in the scope of work or material specific specification.

The Contractor may request a reduction in the 24 hour waiting period, if personal samples collected during the abatement work and detail clean-up work have shown fiber levels below the PEL. Reduction of waiting period must be made in writing, accompanied by personal sample results from this project. The Contractor must acknowledge that reduction in waiting period may result in failed clearance air samples and that retaking and re-analyzing these air samples will be at the Contractor’s expense. Any reduction in waiting time will be at the discretion of the Owner’s CAC and client.

Part 17.2 - Visual Clearance Criteria

The **Contractor** shall perform a pre-final visual inspection of the regulated work area and adjacent surfaces prior to requesting that the Owner’s representative conduct a final visual inspection. The pre-final visual performed by the Contractor shall verify that all materials have been completely removed from the work area, and that the work area meets the requirements specified in Section 17.

In addition, the level of cleanliness in all work areas where asbestos has been removed shall meet the final clearance criteria established in the ASTM E1368-90 Standard Practice for Visual Inspection of Asbestos Abatement Projects.

Upon completion of the pre-final visual inspection by the Contractor a final visual of the containment area will be performed by the Owner’s representative. The CAC will determine the clearance criteria for the project. At a minimum, no three dimensional debris shall be left within the work area; all poly shall be wet wiped so that no visible dust or debris is left; the decontamination chambers shall be clean of all debris; the waste transfer area shall be clean of all debris; all equipment and supplies shall be clean of all debris. The Contractor shall not be released to encapsulate the containment until receiving acceptance by the CAC stating the removal area and the containment have met the criteria of the CAC for completeness of removal and

cleanliness of the containment barriers and surfaces.

The Owner's CAC will conduct the final visual inspection of the work area for visible residue. If any accumulation of residue is observed, it will be assumed to be asbestos and the 24 hour settling period/cleaning cycle will be repeated.

Additional cleaning cycles shall be provided by the Contractor, as necessary, at no cost to the Owner until the specified clean criteria have been met.

Owner's CAC has final say on whether or not an area meets these requirements.

Following the satisfactory completion of clearance-air monitoring, remaining barriers may be removed and properly discarded as non-asbestos containing waste. If contamination exists behind these critical barriers, additional cleaning will be required.

The Owner, Contractor and Owner's CAC shall jointly review the work area and make a damage assessment, after clearance air samples have passed and containment has been torn down.

SECTION 18. CLEARANCE AIR MONITORING

When required, clearance air sampling shall be performed following the requirements specified in Section 18 after encapsulation of the containment has taken place and a sufficient amount of time has passed to allow the encapsulant to dry. The Owner's CAC shall determine the method of analysis to be used based on the amount and type of material removed within a containment. If at a K through 12 site and the quantity of Asbestos-Containing Material (ACM) exceeds 160 square feet or 260 linear feet, analysis of air samples must be by transmission electron microscopy (TEM) per US EPA AHERA regulations.

Clearance-air monitoring shall proceed 24 hours after lock-down or when the area is dry, whichever is later.

Contractor may request a reduction in the 24 hour waiting period, if personal samples collected during the abatement work and detail clean-up work have shown fiber levels below the PEL. Reduction of waiting period must be made by the Contractor accompanied by personal sample results from this project. The Contractor must acknowledge that reduction in waiting period may result in failed, or overloaded (with encapsulant) clearance air samples and that retaking and re-analyzing these air samples will be at the Contractor's expense. Reduction in waiting time will be at the discretion of the Owner's CAC and the Owner.

Air samples will be taken using the "aggressive" air sampling techniques described in the AHERA regulations unless noted differently in the scope of work for non-AHERA sites. In the case aggressive samples cannot be collected (e.g. in a dirt floor area) this will be noted in the Owner's CAC's notes.

If PCM analysis is used for clearance air samples, all clearance samples at all locations shall indicate a fiber concentration of less than or equal to 0.01 f/cc for release of the work area.

If TEM analysis is to be used for clearance air samples, then the clearance criteria shall be the same as AHERA, unless otherwise specified in the scope of work.

Areas exceeding these levels shall be re-cleaned and, if appropriate, re-encapsulated at no additional cost to the owner. All areas where clearance air samples fail will be re-tested.

The Contractor shall be responsible for all subsequent air sampling costs if air samples fail to meet clearance criteria levels. This cost includes four hours of time for Owner's CAC personnel to collected the air samples and the cost of laboratory analysis.

SECTION 19. MONITORING

Owner reserves the right to perform air and performance monitoring at any time.

Contractor shall provide personal air monitoring in accordance with Cal/OSHA regulations. Results shall be made available to the Owner's CAC within 72 hours of collection. Hard copies or electronic copies of these results shall be supplied to the Owner's CAC within 7 days of collection. Failure to supply these sample results in specified time may cause work to be stopped until all delinquent results have been submitted. Loss of Contractor work time because of non compliance with the provisions of this paragraph will not extend the date for work completion.

Owner's CAC may take air samples prior to, during, and after the project. Work shall not be considered complete until all air sampling has been completed and satisfactory levels have been obtained. Satisfactory levels shall be those established by AHERA, unless more stringent requirements have been identified in any other section of this Specification.

In areas where soil contamination may be present, soil samples must meet specified criteria in any other section of this specification prior to clearance air samples collection.

Owner, or Owner's CAC, shall be authorized to issue a STOP WORK order whenever the Contractor's work or protective measures are not in accord with published regulations or contract specifications.

SECTION 20. DISPOSAL PROCEDURES

Part 20.1 - Disposal Procedures

Disposal bags shall be of 6 mil poly, pre-printed with labels as required by DOT, Cal/OSHA and the Department of Toxic Substance Control (DTSC) regulations.

Disposal drums shall be metal or fiber board with locking ring tops to be used only if required and/or allowed by selected dump site.

Stick-on labels as per OSHA and DTSC requirements for disposal containers shall be provided. All containers shall be labeled in accordance with DOT, Cal/OSHA and the DTSC regulations that require a "Caution" label and a "Hazardous Waste" label with the generator's name, address, and Manifest Document number.

As the work progresses, to prevent exceeding available storage capacity on site, sealed and labeled containers of asbestos-containing waste shall be removed and transported to the prearranged disposal location.

Disposal shall be at permitted waste facilities for the type of waste. Transport vehicles shall be marked with the sign prescribed by OSHA during loading and unloading to warn people of the presence of asbestos.

All dump receipts, trip tickets, waste manifests, Waste Shipment Record (WSR) and other documentation of disposal shall be delivered to the Owner, for its records. The manifest shall be signed by the Owner, the waste transporter, and the Disposal Site Operator as the responsibility for the material changes hands. If a second waste transporter is employed, his name, address, telephone number and signature should also appear on the form. The WSR, if used, shall be signed by the Owner or its agent and the disposal site operator.

All manifests shall have asbestos waste identified as: "RQ, Asbestos, 9 NA2212, III". This requirement may be changed as new regulations are issued. See "Waste Disposal" requirements at end of "General

Requirements".

All manifests shall be accompanied by a "Notice and Certification". A signed copy of this must be provided to the Owner or its agent.

Part 20.2 - Transportation to the Landfill

Once drums, bags and wrapped components have been removed from the work area, they shall be loaded into a fully enclosed truck or waste container, which has been lined with 6 mil poly sheeting on the walls and floor. The exception top a fully enclosed waste truck is for roofing projects and when waste loads are generated and placed into open top lined waste trucks that will be “burrito wrapped”.

When moving containers, utilize hand trucks, carts and proper lifting techniques to avoid back injuries. Trucks with lift gates are helpful for raising drums during truck loading.

Any debris or residue observed on containers or surfaces outside of the work area resulting from clean-up or disposal activities shall be immediately cleaned up using HEPA filtered vacuum equipment and/or wet methods as appropriate.

No waste containers shall be on site which contain other hazardous waste, or hazardous waste from any other source or job site. Waste from multiple sites of the Owner within the same waste container is acceptable; however, it must be manifested separately.

If Contractor is storing waste from various sites of one owner, all transportation vehicles shall be covered by the same regulations as the waste container or truck being used to haul the waste to the dump. If equipment or supplies are to be left in vehicles during hauling of waste to waste container or truck, waste and equipment/supplies must be separated by a solid (wood or metal) barrier which has been sealed as a critical barrier. A poly wall barrier is not sufficient.

Waste container, truck, or storage bin must be locked at all times except when being filled.

It is the Contractor's responsibility to see that all waste containers, trucks, and storage bins arrive on site completely free from debris.

The contractor shall provide a weight receipt that identifies the net weight of the material being discarded.

Part 20.3 - Disposal at the Landfill

Upon reaching the landfill, trucks are to approach the dump location as closely as possible for unloading of the asbestos-containing waste.

Bags, drums and components shall be inspected as they are off-loaded at the disposal site. Material in damaged containers shall be re-packed in empty drums or bags as necessary. Local requirements may not allow the disposal of asbestos waste in drums. Check with appropriate agency and institute appropriate alternative procedures.

Waste containers shall be placed on the ground at the disposal site, not pushed or thrown out of the trucks.

Personnel off-loading containers at the disposal site shall wear protective equipment consisting of disposable head, body and foot protection and, at a minimum, half-face, air-purifying, dual cartridge respirators equipped with high-efficiency filters.

Following the removal of all containerized waste, the truck cargo area shall be decontaminated using HEPA

vacuums and/or wet methods to meet the no visible residue criteria. Poly sheeting shall be removed and discarded, along with contaminated cleaning materials and protective clothing, in bags or drums at the disposal site.

SECTION 21. PATENTS AND PREVAILING WAGES

Part 21.1 - Patents

Contractor shall pay all royalties and license fees required for the performance of the work. Contractor shall defend suits or claims resulting from Contractor's or any Sub-contractor's infringement of patent rights and shall indemnify Owner and Owner's representative from losses on account thereof.

Part 21.2 - Prevailing Wage Requirements

The asbestos abatement contractor is fully and totally responsible at all times for compliance with payment of prevailing wage rates pursuant to provisions of the California Labor Code, for compliance with Division 2, Part 7, Chapter 1, California Labor Code, including but not limited to Section 1776; and for compliance with California Labor Code, Section 1777.5 for all apprentice able occupations.

SECTION 22. PERMITS AND FEES

If any permits are required to be issued for any of the Work to be performed by Contractor, Sub-contractor(s) or Sub-subcontractor(s) as part of the Project, it shall be the sole responsibility of the Contractor to expeditiously obtain all such permits and any costs incurred by the Contractor in obtaining such Permits shall be included within the Contract Price.

SECTION 23. SPECIFIC PROCEDURES AND REQUIREMENTS

NOTE: All Specific Procedures and Requirements listed in Section 23 shall be reviewed by the Contractor along with the Scope of Work issued for the project. If any perceived conflicts are present between the Scope of Work and these specifications or within the General Requirements specification itself, the Contractor shall ask for a written interpretation from the Owner's CAC prior to submission of his bid. If conflicts in the "Scope of Work" and this specification or with the General Requirements specification itself are discovered after the start of abatement, the more stringent specification and/or requirements will be enforced. The Owner's CAC shall make the determination as to what which requirements and/or specifications are more stringent.

Part 23.1 - General Repair of Damaged or Removal of Thermal System Insulation (TSI)

Where TSI has been damaged, and it is feasible to repair the small nicks, cuts, and exposed ends, the following procedures shall be performed:

1. Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

2. Place 4-6 mil poly sheeting directly under the area to be worked to collect any fallen debris or repair compound.

3. Half-face respirators and disposable coveralls shall be used during this work.

4. The area shall be restricted to those personnel involved in the work, so posting of the accesses is required. In some cases, poly shall be used to cover the access points.

5. A HEPA vacuum must be in the immediate area to pre-clean any debris observed surrounding the damaged section, or in the event of a mishap.

6. If work is performed indoors, the ventilation system shall be off in the areas worked in to prevent fiber distribution. The ventilation supply, return and exhaust ducts shall be sealed with 6 mil plastic sheeting and duct tape.

7. It may be necessary to remove small sections of other insulation material, such as fiberglass, if debris from the damaged pipe covering has contaminated it.

8. In some cases HEPA vacuuming the damaged section will collect all loose, hanging, friable insulation material prior to any further repair work.

9. Very small cracks, holes, nicks, and cuts can be repaired with only a joint compound or with a single layer of wettable cloth and appropriate bridging encapsulant. Larger sections of damaged pipe covering, particularly where pipe hangers or metal channel have damaged the insulation, will require at least two layers of wettable cloth such as HardCast by Carlisle Industries.

10. Where the pipe covering cannot be removed completely from penetrations in the walls, floors, or ceilings, the pipe covering shall be removed at least 1" into the opening and sealed with a bridging encapsulant to grade. The Contractor may choose to fill large gaps with fiberglass insulation, prior to sealing with the encapsulant.

11. All of the Contractor's materials, including poly sheeting, tape, joint compound, etc. shall be removed at the completion of the work performed.

12. Full removal of interior TSI shall always be performed within a negative pressure enclosure.

13. Removal of TSI from exterior areas or below surface grade shall be performed within a regulated area. Full coverage of insulation material with poly sheeting shall be made prior to removal of any pipe component. Glove bags shall be used to remove TSI at areas where the pipe will be sectioned.

Part 23.2 - Glove Bag Technique Requirements

Where glove bag technique is specified for removal of Thermal System Insulation (TSI), or in those areas where the Contractor opts to use glove bags, all of the following conditions must be met:

1. Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

2. The Contractor shall follow the procedures recommended by the manufacturer of the glove bags, and the specifications required by Federal OSHA and Cal/OSHA regulations.

3. All critical openings shall be sealed prior to set up of the containment.

4. At least one layer of 6 mil poly must be used to fully enclose/contain the abatement area.

5. Stationary objects in the immediate area of the room which cannot be removed from the work area must be covered with at least one layer of 4 mil poly sheeting after being pre-cleaned.

6. A minimum three stage decontamination unit with a shower shall be contiguous with the containment for areas requiring removal of more than 6 linear feet of TSI.

7. Negative pressure shall be established and a recording manometer shall be attached to the containment per Section 13.

8. A HEPA filtered vacuum shall be in the immediate area for use in conjunction with the bags or in case of a spill.

9. Glove bags may not be used on surfaces where temperatures exceed 150 degrees Fahrenheit.

10. Glove bags may be used only once, and may not be moved or slid for removal of a second section of TSI.

11. At least two persons shall perform Class I glove bag removal as defined by Federal and Cal/OSHA.

12. Before beginning the operation, loose and friable material adjacent to the glove bag operation shall be wrapped and sealed in two layers of 6 mil poly sheeting or otherwise rendered intact.

13. The Contractor shall apply a sufficient volume of amended water to all pipe covering scheduled for removal while it is enclosed in the glove bag.

14. Prior to placement in the disposal bag, glove bags shall be collapsed by removing air within them using a HEPA filtered vacuum.

15. Upon detachment, the glove bag must be immediately placed into at least two 6 mil thick disposal bags. The disposal bags must be sealed using the "gooseneck" sealing technique.

16. Where pipes enter walls, floors, or ceilings which are not within the scope of the project, the pipe covering shall be removed at least 1" into the structure and the pipe covering end must be sealed with bridging encapsulant and/or wettable cloth.

17. If the Contractor chooses to use a Negative Pressure Glove Bag System, Negative Pressure Glove Box System, or Water Spray Process System in lieu of the traditional Glove Bag System, the Contractor shall submit to Owner's CAC detailed written procedures on those systems which will be

used. In addition, air sampling data, generated by the Contractor, must be provided to Owner's CAC. Owner's CAC must provide prior approval to alternate techniques and approaches to those specifications detailed here.

18. The Contractor is responsible for salvage and decontamination of all pipe system supports, hangers, brackets, saddles, etc. These items shall be inventoried by the Contractor, and verified by the Owner's CAC before and after abatement. The Contractor will be responsible for replacement of any items lost or damaged.

19. The Contractor shall be responsible for ensuring the piping system remains adequately supported at all times. This may be achieved by readjusting existing hanger brackets as insulation is removed, or by other approved methods, such as inserting wood blocks to replace the thickness of the removed insulation.

Part 23.3 - Mini-Cube Enclosure Requirements

1. Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

2. For the purposes of these specifications, "mini-cube enclosure", enclosure", "mini-enclosure", and "mini-cube" are all used interchangeably and mean the same. The mini-cube enclosure is required to be constructed whenever small sections of walls, ceilings, or pipe insulation are to be removed for electrical, plumbing, mechanical, etc., work. The purpose is to create an enclosed and controlled work environment while removing asbestos or accessing an attic space which is contaminated.

3. Enclosure walls and floors must be constructed of at least one layer of fire-rated 6 mil poly sheeting. No visible holes, cracks, penetrations, etc. shall be within this enclosure. The upright frame shall be adjustable in order to butt the top of the enclosure to the wall or ceiling area. A single drop layer of 6 mil poly sheeting shall be put down and removed daily at the end of the work shift.

4. Since the top of the enclosure must be open in the chamber where ceiling access will take place, special care must be taken prior to moving the enclosure. If the mini-enclosure is designed to be portable, the enclosure must be sealed at the top prior to being moved to the next location. This may be achieved by temporarily sealing the top with poly and tape from the inside.

5. For access to an attic space, position the enclosure at the location to be worked. The enclosure must be butted up to the ceiling surface to form a semi-seal between the top of the enclosure and the ceiling. The enclosure can then be completely sealed to the ceiling, using tape. After a seal has been established, access into the ceiling can then proceed.

6. A HEPA vacuum shall be used to establish "negative pressure" or airflow into the enclosure. This shall be verified by using ventilation smoke tubes.

7. The following equipment and materials, at a minimum, must be present inside the mini-enclosure "dirty" chamber:

   6 mil poly bag for waste.

   Flashlights or drop light as appropriate.

   Daily change of 6 mil poly sheeting drop layer.

   Other tools needed to perform task.

Clean potable water in a Hudson-like sprayer.

HEPA Filtered Vacuum

8. The outside of the poly-flapped entry to the mini-cube must be posted with the CAL/OSHA required warning signs.

9. Clean disposable coveralls must be worn entering the mini-enclosure, and must be removed prior to leaving the mini-enclosure. Depending upon the work being performed, the Contractor may choose to "double suit" in disposable coveralls.

10. For work involving removal of greater than 25 linear feet of TSI, or greater than 10 square feet of asbestos containing surfacing material, regardless of method to be used, a shower must be attached to the mini-cube enclosure and be contiguous with the work environment, and comply with all other requirements in related sections of this Specification.

11. If there is removal of greater than 3 linear feet of TSI, or greater than 3 square feet of surfacing material, regardless of the method used, the enclosure must remain in place until a final visual is passed. Clearance air samples may be required and if so will be collected by the Owner's CAC. Where work involves less than these quantities, only a final visual inspection by Owner's CAC will be required prior to removal of the mini-enclosure.

Part 23.4 - Roofing and HVAC Caulking Abatement Requirements

Not Applicable

Part 23.5 - Vinyl Floor Tile (VFT) & Associated Adhesive Abatement Requirements

General Requirements

Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

For the purposes of this project any direction to remove asbestos-containing or assumed asbestos-containing VFT shall include the removal of the base cove, as well as, the adhesive/mastic used to secure the VFT and/base cove regardless of its asbestos content. Any mastic which has not been tested for asbestos content must be assumed to contain asbestos and removed by the abatement contractor prior to the performance of a final visual by the Owner's CAC, and final air testing of the containment.

Removal of asbestos-containing VFT shall require a negative pressure enclosure/containment be constructed prior to removal, including installation of critical barriers, a splash guard of plastic at the lower 3' of wall from floor level, a sufficient number of DOP tested negative air units to attain a level of at least -0.030" of negative air pressure within the containment, a manometer, and at a minimum, a three-stage decontamination unit with an operational shower and water filtration system. Smaller areas of floor tile and mastic removal may only required a single stage decontamination area without the shower and will be described in the scope of work.

Whenever and wherever possible, the Contractor shall enclose multiple rooms within a building or wing into a single containment. Where rooms are joined by a common interior hallway or have a common exterior walkway, multiple spaces shall be joined together creating one containment using poly enclosures. Where multiple rooms in a building do not have a common interior hallway, multiple rooms shall be joined using a common work chamber built by the Contractor. The common work chamber shall be constructed of wood studs and plywood sheeting for security purposes, and shall be part of the decontamination chamber.

Decontamination units and joined “common areas” outside of a building shall have lockable doors or gates created with temporary fencing for security during off-hours.

Bead blasting of materials will only be allowed with approval of Owner. Contractor must declare use of bead blasting to Owner/Owner’s Representative prior to use of this method, since this is a mechanical method. If a solvent is used, the negative air unit exhaust shall be directed down wind of make-up air vents a sufficient distance to preclude the re-entrainment of vapors back into the building. Any solvents used for removing adhesive/mastic shall be non-toxic, low odor, non-flammable, and compatible with the new flooring adhesive/mastic.

A safety data sheet for the solvent(s) proposed for use shall be provided in the pre-construction submittal package, all solvent(s) must be approved by the Owner’s CAC prior to their use.

Except as amended here and in the “Scope of Work” Section, all other Sections of these specifications shall be followed.

Contractor Responsibilities

1. The Contractor shall provide all necessary notifications, equipment, tools, materials, lighting, labor, etc. to perform the work. Notification as appropriate to OSHA, EPA, or the delegated Air Quality Management District is the responsibility of the Contractor.

2. All HEPA equipment to be used on the project must be delivered to the site empty of any debris, clean, free of dust, and in full operating condition. HEPA equipment shall be DOP tested at the beginning of the set-up phase and prior to installation into the containment or use on the project. Any equipment removed from the site for more than 10 working days must be DOP tested again prior to re-use on the project.

3. DOP certification testing shall be observed and witnessed by an Owner’s CAC. Copies of DOP test results and certification must be submitted to Owner’s CAC within 24 hours of the testing being performed.

4. All poly sheeting to be used for the construction of full enclosures/containments must be fire retardant. SDS information reflecting this requirement must be submitted prior to use.

5. The Contractor shall be responsible for all clean-up and costs associated with the decontamination of occupied spaces adjacent to any containment where removal of asbestos-containing material is conducted. The Contractor shall also be responsible for damage to building finishes and costs associated with removal of tape glue, staining of wall finishes, or destruction of wall surface integrity. It is the responsibility of the Contractor to identify with the General Contractor all aspects of the project requirements pertaining to these types of damages.

General VFT & Adhesive/Mastic Removal Instructions and Requirements

1. For the purposes of this project, removal of VFT and associated adhesive/mastic by any method shall be performed by personnel who are properly trained and accredited to perform Class II work.

2. No personnel are allowed into the containment area during actual removal work without proper respiratory and personal protective equipment. At a minimum, this shall include half-face negative pressure respirators, full body coveralls, rubber boots, and gloves. During removal of adhesive/mastic with solvent or other organic based liquid, combination respiratory cartridges (organic vapor/HEPA) shall be worn, by workers to protect against asbestos and the solvent. Rubber gloves shall also be worn to protect workers skin from the solvent material. No street clothes or shoes shall be worn

inside containment during the removal process.

3. All doors, windows, and penetrations into the room(s) shall be sealed with poly sheeting. All ventilation systems shall be locked-out and sealed with critical barriers of either poly sheeting or plywood sheeting. No spray glue may be used on any Owner property or building surface.

4. The splash guard shall be a minimum of 3 feet in height from the base of the wall upward.

5. Based on the size of the enclosure/containment, a three stage decontamination unit shall be put into place and be fully operable.

6. Sufficient negative air units shall be installed which will provide a minimum of four air changes per hour and -0.030" air pressure differential. A manometer with an recording chart shall be installed and operational. The manometer chart shall reflect the location, times, and dates of all measurements recorded. Once these requirements have been met and the negative pressure has been established, the Contractor shall request a pre-start visual inspection from Owner's CAC.

7. When the Contractor has passed the pre-start visual inspection, removal of base cove/boards may be conducted. Base cove adhesive shall be removed completely on hard surfaced walls where damage to the substrate will not occur, or only to a point of smoothing out high spots on walls which will become damaged due to the work to be performed. Full removal is not expected unless the Contractor is notified in writing on these types of soft substrate surfaces and if required in the scope of work.

8. Sufficiently wet VFT with amended water prior to and during the removal phase of work, and place into waste containers for disposal. Acceptable methods of containing VFT waste materials include placing VFT into clear properly labeled 6 mil poly bag and deposit this bag into a lined fiberboard drum. The drum shall be sealed when filled and placed into a waste container for disposal.

9. Method of removal pertaining to asbestos-containing adhesive/mastic shall be at the discretion of the Contractor, except methods which are noted in this Exhibit that are prohibited. Hand scraping, solvents, and wet buffing with solvents are acceptable methods. If the Contractor chooses to use solvents, exhaust of negative air units shall be directed downwind as much as possible, or a sufficient length of exhaust hose will be required to prevent re-entrainment of the vapors.

10. To minimize damage to the existing paint above the base cove, the contractor shall use a utility knife to cut score the paint at the intersection of the base cove. This will allow removal of the base cove with minimal damage to the paint layer.

11. Any solvents used for removing adhesive/mastic shall be non-toxic, low odor, and non-flammable. A SDS for the solvent shall be provided and subject to approval by the Owner's CAC prior to use.

12. Upon completing the removal of all floor tiles and adhesive/mastic, the Contractor shall remove the splash guard from the containment walls, and conduct wet wiping on all surfaces within the containment/enclosure.

13. If a solvent was used to remove any VFT adhesive/mastic, the Contractor shall wash the floors thoroughly using a solution of trisodium phosphate (TSP), or equivalent, and water. Sufficient water shall be used for final rinsing of the floor for a clean finish.

14. It is the sole responsibility of the Contractor to reduce concentrations of any solvents used to a level which will allow new adhesive/mastic to be applied, if new flooring is to be installed. Owner's CAC will not test the floor for PH levels, and will not attest that the solvents used have been reduced in any way.

15. Solvent removal may only be performed on substrate that will be demolished. District requires the use of media blasting or abrasive grinding with HEPA vacuum attachment on any concrete substrate that will remain to accept new flooring.

Final Visual Inspection

1. Upon the completion of all activities listed above, the asbestos contractor shall provide their own visual inspection prior to Owner's CAC, and shall be present during the inspection by Owner's CAC to remove/clean additional surfaces as needed, prior to encapsulation.

2. The final visual inspection will include an evaluation of all surfaces within the containment area, with emphasis placed on the completeness of materials removed from the floor area. Any three dimensional debris identified by the Owner's CAC, which can be seen using a flashlight placed on the floor and directed across the floor, shall be removed as directed with the use of a HEPA vacuum and other tools as necessary to remove the material. The Contractor shall thoroughly clean all equipment inside the containment, including all parts of the negative air units, and new pre-filters shall be installed into all negative air units.

Disposal Requirements

1. Asbestos containing floor tile and mastic waste may be disposed as a non-friable non-hazardous waste stream if they are removed by manual methods. If the materials are removed by mechanical means, the waste stream shall be disposed as friable hazardous asbestos waste and will require a Uniform Hazardous Waste Manifest. Package all solvent/mastic waste created during the project in sufficient absorbent to eliminate all free liquids, and place in a D.O.T. 7A Type A approved steel drum (49 CFR 178.350). Label the drum as required, and transport to an approved Class 1 landfill with a separate Uniform Hazardous Waste Manifest and Waste Profile Documentation.

2. The Contractor SHALL NOT sign any Hazardous Waste Manifests for the Owner. It shall be the responsibility of the Contractor to notify the Owner's CAC and coordinate having any manifest properly signed by a Owner representative.

Part 23.6 - Carpet Removal over Vinyl Floor Tile (VFT)/Tile Adhesive Requirements

General Requirements

Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

The following requirements are for use when the only removal to be performed is of carpet applied over existing VFT or bare VFT mastic. If the intended removal includes the underlying materials and/or any associated base cove refer to and follow the requirements as set forth in Part 23.5 Vinyl Floor Tile (VFT) and Associated Adhesive Abatement Requirements.

For the purposes of this project any direction to remove carpet from over known or assumed asbestos containing VFT or bare VFT mastic where the carpet is found to be directly adhered to those surfaces by carpet glues or carpet mastic the following requirements shall apply. These requirements shall be enforced regardless of the amount of floor tile/mastic expected to be impacted by the removal process.

1. The Contractor shall provide all necessary notifications, equipment, tools, materials, lighting, labor, etc. to perform the work. Notification as appropriate to OSHA, EPA, or the delegated Air Quality Management District is the responsibility of the Contractor.

2. All HEPA equipment to be used on the project must be delivered to the site empty of any debris, clean, free of dust, and in full operating condition. HEPA equipment shall be DOP tested at the beginning of the set-up phase and prior to installation into the containment or use on the project. Any equipment removed from the site for more than 10 working days must be DOP tested again prior to re-use on the project.

3. DOP certification testing shall be observed and witnessed by an Owner's CAC. Copies of DOP test results and certification must be submitted to Owner's CAC within 24 hours of the testing being performed.
4. All poly sheeting to be used for the construction of enclosures/containments must be a fire rated material. SDS information reflecting this requirement must be submitted prior to use.

5. The Contractor shall be responsible for all clean-up and costs associated with the decontamination of occupied spaces adjacent to any containment where removal of ACM is conducted. The Contractor shall also be responsible for damage to building finishes and costs associated with removal of tape glue, staining of wall finishes, or destruction of wall surface integrity, unless the building is to be demolished. It is the responsibility of the Contractor to identify with the General Contractor all aspects of the project requirements pertaining to these types of damages.

6. Whenever vinyl floor tiles are to be removed, the base cove shall also be removed as part of the project. When the Contractor has passed the pre-start visual inspection, removal of base cove/boards may be conducted. Base cove adhesive shall be removed completely on hard surfaced walls where damage to the substrate will not occur, or only to a point of smoothing out high spots on walls which will become damaged due to the work to be performed. Full removal is not expected unless the Contractor is notified in writing on these types of soft substrate surfaces.

7. To minimize damage to the existing paint above the base cove, the contractor shall use a utility knife to cut score the paint at the intersection of the base cove. This will allow removal of the base cove with minimal damage to the paint layer.

General Carpet Removal Instructions and Requirements

1. No personnel are allowed into the containment area during actual removal work without proper respiratory and personal protective equipment. At a minimum this shall include half-face negative pressure respirators with P-100 (HEPA) cartridges and full body coveralls.

2. All ventilation systems shall be locked-out and sealed with critical barriers of poly sheeting. Other penetrations such as doors, vents, etc. must also be sealed with either tape or poly sheeting as appropriate to secure the work area. A single stage cubicle unit of appropriate size for the work to be performed shall be placed on the entrance to the room. At a minimum this unit must be 3' X 3' X 6' in height. No spray glue may be used on any Owner property or building surface, unless the building is being demolished.

3. A remote clean-up and decontamination unit shall be put into place in a location considered to be central to the work being performed. This decontamination unit shall be equipped with a full shower unit, overflow pan, filtration unit, soap, warm and cold water, towels, etc. as required in other sections of this specifications. Decontamination procedures will be based on the actual amount of asbestos-containing materials impacted during the carpet removal. As a guide, if more than 100 square feet of VFT are impacted during carpet removal, the personnel performing the work shall shower at the end of each work period. If less than 100 square feet of VFT or VFT mastic are impacted during the process modified worker decontamination practices may be used.

4. A sufficient number of negative air units shall be installed which will provide a negative air pressure of at least -0.030" wp measured with a manometer.

5. When the Contractor has passed the pre-start visual inspection, removal of carpet may be conducted.

6. VFT adhered to the surface of the existing substrate will be removed from the carpet utilizing hand methods and hand tools as needed. These tiles shall be placed into waste containers for disposal. If all VFT has been removed from the carpet the carpet may be disposed as regular waste with no restrictions.

7. Any carpet removed from bare VFT mastic and the asbestos containing mastic remains adhered to the carpet will require the carpet be wrapped in two layers of polyethylene sheeting, properly labeled to meet Cal/OSHA requirements, and disposed as a non-hazardous asbestos containing waste in an appropriate landfill permitted to accept such asbestos waste.

Part 23.7 - Sheetrock and Joint Compound Abatement Requirements

General Requirements

Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

Removal of sheetrock and joint compound wall and ceiling system materials known to contain <1% asbestos as a composite material verified by the 400 Point Count method shall include the removal of all nails, screws, or other fastening units which have visible sheetrock and/or joint compound remaining, as well as, all dust, debris, and waste generated by the removal work.

Removal shall require a full enclosure/containment under negative pressure following all of the requirements in these specifications including a three stage worker decontamination unit.

Removal of less than 100 square feet of asbestos containing sheetrock and joint compound wall and/or ceiling system materials shall require a negative pressure enclosure, however, the use of a one stage decontamination unit without a shower will be permitted. All other containment requirements apply.

General Sheetrock and Joint Compound Wall and Ceiling Systems Removal Instructions and Requirements

1. No personnel are allowed into the containment area during actual removal work without proper respiratory and personal protective equipment. At a minimum this shall include half-face negative pressure respirators, full body coveralls, rubber boots, and gloves. No street clothes or shoes shall be worn inside containment during the removal process.

2. All doors, windows, and penetrations into the room(s) shall be sealed with poly sheeting. All ventilation systems shall be locked-out and sealed with critical barriers of either poly sheeting or plywood sheeting.

3. Full enclosure of the walls and ceiling with poly sheeting (as applicable) will be required, no matter what method of removal is used. Support of ceiling poly will be at the discretion of the Contractor. Ceiling may be constructed of one layer of 4 mil poly sheeting. Walls shall be constructed of one layer of 4 mil poly.

4. Based on the size of the enclosure/containment, a three stage decontamination unit shall be put into place and be fully operable.

5. A sufficient number of negative air units shall be installed which will provide a negative air pressure of at least -0.030" wp measured with a manometer.

6. Sufficiently wet sheetrock and joint compound wall and ceiling systems to be removed with amended water prior to and during the removal phase of work, and place into waste containers for disposal.

7. Upon completing the removal of all sheetrock and joint compound wall and ceiling systems, the Contractor shall conduct wet wiping on all remaining surfaces within the containment/enclosure.

Disposal Requirements

1. All sheetrock and joint compound wall and ceiling system waste that has been tested and found to contain <1% asbestos by the 400 Point Count method may be disposed as non-hazardous asbestos waste, in a landfill permitted to accept non-friable, non-hazardous asbestos containing material.

2. Waste material containers, including "burrito wrapped" material, shall have warning labels affixed. Contractor may either use the Cal/OSHA Title 8, 1529 (k)(8)(A-D) warning:

DANGER
CONTAINS ASBESTOS FIBERS
MAY CAUSE CANCER
CAUSES DAMAGE TO LUNGS
DO NOT BREATHE DUST
AVOID CREATING DUST

3. All non-hazardous asbestos containing waste shall be tracked utilizing some form of system which at a minimum includes: date, document number, generator name and mailing address, description of the waste, waste generating site address, contractor company name and address, special handling instructions, transporter company name, as well as name and address of facility accepting the waste

4. Any drywall systems with skim coat or texture coat that contains >1% asbestos shall be handled, packaged and disposed as a friable hazardous asbestos waste.

Part 23.8 - Wood Floor & Associated Sublayers Removal Requirements

General Requirements

Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

The following requirements are for use when the only removal to be performed is of the wood gym flooring and associated sublayers. If the intended removal includes the underlying materials and/or any associated base cove refer to and follow the requirements as set forth in Part 23.5 Vinyl Floor Tile (VFT) and Associated Adhesive Abatement Requirements.

For the purposes of this project any direction to remove wood flooring from over known or assumed asbestos containing sublayers where the wood flooring is found to be directly adhered to those surfaces by glues or mastic the following requirements shall apply. These requirements shall be enforced regardless of the amount of wood flooring/mastic expected to be impacted by the removal process.

1. The Contractor shall provide all necessary notifications, equipment, tools, materials, lighting, labor,

etc. to perform the work. Notification as appropriate to OSHA, EPA, or the delegated Air Quality Management District is the responsibility of the Contractor.

2. All HEPA equipment to be used on the project must be delivered to the site empty of any debris, clean, free of dust, and in full operating condition. HEPA equipment shall be DOP tested at the beginning of the set-up phase and prior to installation into the containment or use on the project. Any equipment removed from the site for more than 10 working days must be DOP tested again prior to re-use on the project.

3. DOP certification testing shall be observed and witnessed by an Owner's CAC. Copies of DOP test results and certification must be submitted to Owner's CAC within 24 hours of the testing being performed.

4. All poly sheeting to be used for the construction of enclosures/containments must be a fire rated material. SDS information reflecting this requirement must be submitted prior to use.

5. The Contractor shall be responsible for all clean-up and costs associated with the decontamination of occupied spaces adjacent to any containment where removal of ACM is conducted. The Contractor shall also be responsible for damage to building finishes and costs associated with removal of tape glue, staining of wall finishes, or destruction of wall surface integrity, unless the building is to be demolished. It is the responsibility of the Contractor to identify with the General Contractor all aspects of the project requirements pertaining to these types of damages.

6. Whenever wood flooring is to be removed, the base cove shall also be removed as part of the project. When the Contractor has passed the pre-start visual inspection, removal of base cove/boards may be conducted. Base cove adhesive shall be removed completely on hard surfaced walls where damage to the substrate will not occur, or only to a point of smoothing out high spots on walls which will become damaged due to the work to be performed. Full removal is not expected unless the Contractor is notified in writing on these types of soft substrate surfaces.

7. To minimize damage to the existing paint above the base cove, the contractor shall use a utility knife to cut score the paint at the intersection of the base cove. This will allow removal of the base cove with minimal damage to the paint layer.

General Wood Flooring Removal Instructions and Requirements

1. No personnel are allowed into the containment area during actual removal work without proper respiratory and personal protective equipment. At a minimum this shall include half-face negative pressure respirators with P-100 (HEPA) cartridges and full body coveralls.

2. All ventilation systems shall be locked-out and sealed with critical barriers of poly sheeting. Other penetrations such as doors, vents, etc. must also be sealed with either tape or poly sheeting as appropriate to secure the work area. A single stage cubicle unit of appropriate size for the work to be performed shall be placed on the entrance to the room. At a minimum this unit must be 3' X 3' X 6' in height. No spray glue may be used on any Owner property or building surface, unless the building is being demolished.

3. A remote clean-up and decontamination unit shall be put into place in a location considered to be central to the work being performed. This decontamination unit shall be equipped with a full shower unit, overflow pan, filtration unit, soap, warm and cold water, towels, etc. as required in other sections of this specifications. Decontamination procedures will be based on the actual amount of asbestos-containing materials impacted during the carpet removal. As a guide, if more than 100 square feet of assumed asbestos containing sublayers are impacted during wood flooring removal, the personnel performing the work shall shower at the end of each work period. If less than 100 square feet of

assumed asbestos containing sublayers are impacted during the process modified worker decontamination practices may be used.

4. A sufficient number of negative air units shall be installed which will provide a negative air pressure of at least -0.030" wp measured with a manometer.

5. When the Contractor has passed the pre-start visual inspection, removal of carpet may be conducted.

6. Assumed asbestos containing sublayers adhered to the surface of the existing substrate will be removed from the wood flooring utilizing hand methods and hand tools as needed. These sublayers shall be placed into waste containers for disposal. If all sublayers has been removed from the wood flooring the carpet may be disposed as regular waste with no restrictions.

7. Any wood flooring removed from bare flooring mastic and the assumed asbestos containing mastic remains adhered to the wood flooring will require the wood flooring to be wrapped in two layers of polyethylene sheeting, properly labeled to meet Cal/OSHA requirements, and disposed as a non-hazardous asbestos containing waste in an appropriate landfill permitted to accept such asbestos waste.

Part 23.9 - Impact to and Removal of Transite Pipe, Shingle, or Sheeting Materials

Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

Where transite pipe, shingles, or sheeting is to be impacted or removed the following procedures shall be performed:

1. All requirements of Cal/OSHA Section 1529 and US EPA AHERA regulations apply, and shall be followed, as well as, other applicable Federal, State, and local regulations as they pertain to training, work practices, air monitoring, waste disposal, etc.

2. Personal air monitoring shall be performed in accordance with Cal/OSHA Section 1529

3. Establishment of a work area restricting access to those personnel involved in the work, and posting of the work area is required.

4. An appropriately sized drop cloth of 6-10 mil poly sheeting sufficient in size to contain any debris generated during the removal shall be placed directly under the area to be worked to collect any fallen debris generated during the work.

5. Half-face and disposable coveralls shall be used during this work.

6. A HEPA vacuum must be in the immediate area ready for use.

7. Where the pipe must be cut the contractor may use any method applicable to performing the work. Any use of hand or mechanical saws, or other method which will produce dust and will require the use of the HEPA vacuum and engineering controls which will collect any and all dust generated during the sawing process.

8. The Contractor shall apply a sufficient amount of amended water to all pipe surfaces to be impacted during the work to keep them adequately wet.

9. All of the Contractor's materials, including poly sheeting, tools, etc. shall be properly decontaminated

of visible dust and pipe debris utilizing wet cleaning methods and HEPA vacuuming prior to being removed at the completion of the work performed. Disposable materials must be properly disposed.

10. Intact transite waste generated may be disposed as non-friable non-hazardous asbestos waste, in a landfill permitted to accept non-friable, non-hazardous asbestos material. If the transite material is currently friable, or becomes friable during its removal, it shall be disposed of in a landfill permitted to accept friable hazardous asbestos waste.

    It is acceptable to dispose of non-friable transite waste after placing it into two 6 mil thick polyethylene bags properly sealed and marked to meet current OSHA requirements.

11. The Contractor is required to provide to Owner's Agent a copy of the "trip ticket" indicating the actual weight of waste material and the landfill accepting the waste.

Part 23.10- Demolition with Selected Asbestos Containing Materials Left in Place

Not Applicable

Part 23.11 - Contaminated Attic Space Procedures

Not Applicable

Part 23.12 - Non-Friable, Non-Hazardous, Glazing Abatement Requirements

Not Applicable

Part 23.13 - Subfloor Crawl Space Dirt Removal Requirements

Not Applicable

Part 23.14 - Subfloor Enclosure Requirements

Not Applicable

Part 23.15 - Installation of "Rat Slab" in Sublfoor Crawl Space Requirements

Not Applicable

Part 23.16 - Stucco/Texture/Plaster Removal and Containment Requirements

General Requirements

Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

Stucco/texture surfacing materials regardless of asbestos content from interior or exterior building components shall be removed by either by hand or by other mechanical methods within a negative pressure enclosure with a manometer and following all requirements in these specifications including a three stage worker decontamination unit.

1. Rigid scaffolding or framing shall be constructed on the exterior of buildings where a negative pressure enclosure is required. All plastic sheeting shall be secured to the scaffold or framing in a manner sufficient to maintain structural integrity of the enclosure at all times.

2. Removal of stucco/texture regardless of asbestos content over a surface area greater than 10 square feet will require the construction and use of a three stage decontamination unit. This decontamination unit must be directly attached to the entrance of the containment enclosure and fully operable with working shower and hot water heater, as well as properly stocked with towels, soap, and shampoo.

3. Sufficient negative air units shall be installed which will provide a minimum of 4 air changes per hour and -0.030" air pressure differential measured with an attached manometer.

4. Fencing or other physical barriers shall be positioned in order to prevent access to exterior containment enclosures by any non-asbestos trained personnel.

5. Upon completing removal of all stucco/texture, the Contractor shall conduct wet wiping of all remaining wall surfaces, poly barriers, scaffolding, etc. to remove settled dust from those surfaces.

Final Lockdown-Encapsulation

1. Lock down-encapsulation of the containment shall be performed using one of two methods based on the needs of the project.

    A. **Hand Wipe Method:** The needs of the project may require the remaining building component surfaces have no new film materials applied to them. If this is required the asbestos abatement contractor shall use clean wet cloths/towels to wipe existing surface dust off of remaining building components. These cloths/towels will be wetted with clean water and no chemicals or treatments will be added. All poly sheeting scaffolding and other components used to create the containment will be hand wiped with wetted cloths/towels which are treated

with lock down-encapsulation chemicals to remove possible surface dust and lock down-encapsulate the surfaces of these items. This method can be used prior to the final visual to complete the final cleaning process.

B. **Air-less Spray Method**: The asbestos contractor shall lock down-encapsulate the entire containment area upon completion of the final visual inspection by the Owner's CAC, and acceptance of the work as complete.

Disposal Requirements

1. All waste containing less than 1% asbestos shall be properly disposed as a non-hazardous asbestos containing waste at an appropriate landfill. All waste containing greater than 1% asbestos shall be properly disposed as hazardous asbestos waste, in a landfill permitted to accept friable, hazardous ACM.

2. All waste containers shall have labeling in accordance with OSHA, DOT, EPA and DTSC requirements. All "Hazardous Waste" shall also include a Waste manifest with the generator's name, address, and Manifest Document number.

Part 23.17 - Fireproofing and Cementitious Texture Plaster Abatement Requirements

General Requirements

Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.

All fireproofing and cementitious texture plaster material regardless of amount shall be removed in a negative pressure enclosure/containment. The enclosure shall include critical barriers, two layers of plastic on walls if the walls are not being removed, a sufficient number of DOP tested negative air units to attain a level of at least -0.030" of negative air pressure within the containment, a digital recording manometer with a minimum of displaying three digits after the zero (0.000). At a minimum, a three-stage decontamination unit with an operational shower and water filtration system.

1. Removal of fireproofing/cementitious texture plaster by multiple methods and techniques shall be performed by personnel who are trained and accredited to perform Class I work.
2. Water blasting of fireproofing is not allowed.

3. No personnel are allowed into the containment area during actual removal work without proper respiratory and personal protective equipment. At a minimum this shall include full-face powered air purifying respirators, and full body coveralls.

4. All doors, windows, and penetrations into the room(s) shall be sealed with poly sheeting. All ventilation systems shall be locked-out and sealed with critical barriers of either poly sheeting or plywood sheeting.

5. Full enclosure of the walls and ceiling with poly sheeting (as applicable) will be required, no matter what method of removal is used. Support of ceiling poly will be at the discretion of the Contractor. Ceiling may be constructed of one layer of 4 mil poly sheeting. Walls shall be constructed of two layers of 4 mil poly.

6. A three stage decontamination unit is required and shall be comprised of zippered doors between the chambers. Flapped doors will not be acceptable. The decontamination unit shall be cleaned daily of all debris, bags, tape, towels, etc. and shall remain clean during the day..

7. Since all asbestos workers will be required to shower upon leaving the work area, all workers shall wear a bathing suit under the full body coverall. The shower shall have hot and cold water, shampoo, soap and clean dry towels for drying. **No street clothes or shoes shall be worn inside containment by the asbestos contractor employees during the removal process**. The contractor cannot wear leather work boots in the shower, so steel toed rubber boots are required to be worn. Rubber boots shall be left in the equipment room before entering the shower and they can be washed at the end of the work day and placed inside of asbestos waste bag, taped closed and removed.

8. Sufficient negative air units shall be installed which will provide a minimum of 4 air changes per hour and a minimum of -0.030" air pressure differential, while the zippered doors are opened for bag-out of waste. A digital manometer recording shall be made of all days when in use. The manometer tapes shall reflect the location, times, and dates of all measurements recorded.

9. When the Contractor has passed the pre-start visual inspection by the asbestos consultant, removal of fireproofing may be conducted.

10. Sufficiently wet fireproofing to be removed with amended water prior to and during the removal phase of work, and place into waste containers for disposal.

11. No fireproofing/cementitious texture plaster shall be allowed to remain on the floor of the containment at the end of each work shift. All fireproofing removed on a shift shall be placed in waste containers. During asbestos removal, all floors of the containment shall remain wet by frequent wetting with amended water. At no time shall the floor of the containment be dry.

12. The contractor shall clean all surfaces of the substrate using whatever tools to effectively clean and remove the material. On metal fluted decks where fireproofing/cementitious texture plaster material is removed, all fluted openings shall be cleaned of debris using small tools rags, brushes, etc. as necessary to reach the remove the material. Upon completing the removal of all fireproofing/cementitious texture plaster, the Contractor shall conduct wet wiping on all remaining surfaces within the containment/enclosure. Use of an airless spray to detail clean the fluted openings is an acceptable cleaning technique.

Disposal Requirements

1. All fireproofing/cementitious texture plaster waste shall be disposed as friable hazardous asbestos waste at a landfill permitted to accept friable, hazardous asbestos containing material.

SECTION 24. ASBESTOS SPECIFICATIONS/PROCEDURES

Part 24.1 - Contacts

Jose Hernandez, Entek Consulting Group, Inc. 916-632-6800

Part 24.2 - Removal Locations

Refer to architectural drawings for this site identifying the buildings and work included in the project and scope of work outline. The General Contractor and his Sub-contractor are responsible for estimating the amount of asbestos-containing materials to be disturbed or removed as revealed on the mandatory bid walk, and provided in the project specifications and architectural drawings. The drawings will also provide the Contractor with locations where work is to be performed to allow computation of the quantities of materials to be impacted or removed.

The asbestos contractor shall provide a complete copy of this specification to their onsite competent person for reference while conducts work on the project. A copy of these specifications shall remain onsite by the asbestos contractor for the duration of the project.

Part 24.3 - Materials to be Abated

Refer to the architectural drawings and project specifications for designations and instructions pertaining to what materials are to be removed or impacted during this project. Directions pertaining to materials to be impacted or removed during this project are **NOT** included in this Exhibit. This exhibit includes work practices and procedures for those materials that are impacted by the planned renovation/demolition.

Areas of roofs, walls, floors, and/or ceilings may require penetrations be made during the project which may involve asbestos containing materials (ACM) depending upon the location of penetrations. Prior to impacting any building materials which are listed as “suspect” for containing asbestos by the US EPA the Contractor should refer to Section 25, Asbestos Results List for information pertaining to specific Asbestos Containing Materials (ACM) or products known to exist on the site. Materials suspected of containing asbestos but which have not been tested are “assumed” to contain asbestos.

A hazardous materials inspection was conducted by Entek Consulting Group, Inc. for the Umoja International Academy, in preparation of the gym flooring renovation project. The contractor shall refer to the Hazardous Materials Survey report prepared on May 5, 2026, which includes all suspect building materials that were sampled and analyzed for asbestos and included an assessment for lead in paint and ceramic products. The report also includes discussion on Freon, PCB in ballasts, and fluorescent light tubes.

Materials commonly excluded from being suspected for containing asbestos include but are not limited to: unwrapped pink and yellow fiberglass insulating materials or products, foam insulation, wood, metal, plastic, or glass. All other types of building materials or coatings on the materials listed above are commonly listed as “suspect” and must be tested prior to impact by a Contractor.

Attic spaces at this site may already be contaminated with asbestos roofing debris from prior roofing replacement projects, but is unknown. If ceiling systems are removed and it is discovered that suspect roofing debris is present, the contractor shall stop work and bring it to the attention of the project manager to assess the potential for asbestos.

Part 24.4 - Containment and Abatement Requirements

The general guidelines in these specifications shall be followed by the asbestos abatement contractor for all work on this project. All requirements of Cal/OSHA Section 1529 and US EPA AHERA regulations apply, and shall be followed, as well as, other applicable regulations.

The Contractor shall follow all requirements set forth in Section 23, Specific Procedures and Requirements when disturbing or removing specific asbestos containing materials.

All asbestos related work shall be performed within negative pressure work enclosures for any class of asbestos work. The term “containment” or “enclosure” shall be construed to mean a containment which is constructed to enclose a work area (as defined in Section 2), and meet all applicable requirements set forth in Sections 2 through 22 of this Specification and all governing regulatory agency requirements. Each containment shall be tailored to meet the needs of the “work area” to be enclosed and include all requirements as set forth in the above related sections and government regulations applicable to asbestos related work.

Sufficient negative air units shall be installed which will provide a minimum of 4 air changes per hour and a minimum of -0.030" air pressure differential, while the zippered doors are opened for bag-out of waste. A digital manometer recording shall be made of all days when in use. The digital recording manometer shall have at a minimum the ability of displaying three digits after the zero (0.000). The manometer tapes shall reflect the correct location, times, and dates of all measurements recorded. Once these requirements have been met and the negative pressure has been established, the Contractor shall request a pre-start visual inspection from Owner’s asbestos consultant.

A three stage decontamination unit is required and shall be comprised of zippered doors between the chambers. Flapped doors will not be acceptable. The decontamination unit shall be cleaned daily of all debris, bags, tape, towels, etc. and shall remain clean during the day. The clean room of any three stage decontamination unit shall be at least 5' in width, 5' in length, and 7' in height. Multiple showers are required if the number of asbestos workers exceeds ten per Title 8 3366 Washing Facilities. When there are less than five employees, the same shower may be used by both sexes if the shower room can be locked from the inside.

Part 24.5 - Contractor Assist Requirements

The asbestos contractor shall provide "contractor assist" services for electrical, plumbing, mechanical, and other trades as necessary and agreed to with the General Contractor, for work to be conducted in spaces such as attics, wall cavities, and mechanical rooms where asbestos contamination is present, or where ACM are to be disturbed in order to perform the work.

Contractor assist work shall require the asbestos contractor to construct a mini-cube enclosure, create access to the contaminated area, and wet wipe or HEPA vacuum all dust and debris from the immediate work area as needed to create a "clean" environment for the trade workers to work. All procedures specified in Section 23 shall be followed.

Part 24.6 - Worker Protection

At a minimum half-face respirators with P-100 (HEPA) cartridges, disposable coveralls, and hard sole shoes shall be used during the removal and disposal of all asbestos containing material. Full-face powered air purifying respirators (PAPR) with P-100 cartridges are required for all Class I work. Workers wearing tennis shoes, sandals, or soft sole type shoes will not be allowed to work on roofs or inside containments regardless of the activity being performed. Worker protection for all other work areas shall be in compliance with Cal/OSHA requirements and shall follow the respirator selection as specified in Title 8 section 5144.

Part 24.7 - Electrical and Water Hook-Ups

The Owner shall provide access for electrical and water hook-ups. The Contractor shall install a temporary electrical spider box to an existing electrical panel using a licensed qualified electrical contractor. The Contractor is responsible for all hook-ups, electrical cords, water hoses, and hose bibs necessary for attachment.

Part 24.8 - Visual and Air Clearance Criteria

The Contractor shall perform a pre-final visual of the removal area and adjacent surfaces prior to requesting that Owner's asbestos consultant (CAC) conduct a final visual inspection. The pre-final visual performed by the Contractor shall verify that all materials have been completely removed from the work area, and that the work area meets the requirements specified in Section 17.

Upon completion of the pre-final visual inspection by the Contractor, a final visual of the containment area will be performed by Owner's asbestos consultant. The Contractor shall not be allowed to encapsulate the containment until receiving acceptance by Owner's asbestos consultant confirming the removal area and the containment have met the criteria of Owner's asbestos consultant for completeness of removal of asbestos materials and cleanliness of the containment barriers and surfaces.

Clearance air sampling will be performed following passing the visual inspection, encapsulation of the containment has taken place and a sufficient amount of time has passed to allow the encapsulant to dry. All clearance air samples will be analyzed by transmission electron microscopy (TEM), and performed by a NIST/NVLAP accredited laboratory. The clearance criteria for releasing the Contractor is the AHERA Standard, with the average of all air samples less than 70 asbestos structures per square millimeter. Aggressive air sampling will be used, which includes using a leaf blower in conjunction with fans to dislodge any remaining dust within the containment.

Part 24.9 - Owner's Responsibility

Not Used

Part 24.10 - Disposal Requirements

Disposal of all friable hazardous asbestos containing waste must be tracked utilizing a current copy of a Uniform Hazardous Waste form. These forms are to be properly filled out by the Contractor and signed by an authorized Owner's representative. All non-friable non-hazardous asbestos waste shall be tracked using a Bill of Lading or equivalent and signed by an authorized Owner's representative. No individual or representative other than the Owner's designated representative is permitted to sign Uniform Hazardous Waste forms or bill of Lading or equivalent for the Owner.

It shall be the responsibility of the Contractor to notify Owner's CAC and coordinate having a hazardous waste manifest properly signed by a Owner representative.

Part 24.11 - Work Periods

Work periods shall be scheduled with Owner's CAC at least 48 hours prior to the start of any shift. If weekend work is to be conducted, shift times are to be established and approved by Owner's CAC. All shifts are to consist of 8 hours and will begin at the time specified and agreed to by Owner's CAC and the abatement contractor.

PREPARED BY:

Jose Hernandez
Project Manager
Entek Consulting Group, Inc.
CAC#22-6995
May 5, 2026

Part 24.12 - Pre-Construction Submittal List

1. _____ Copy of State of California - Contractor's State License

2. _____ Copy of State of California CSLB Active License

3. _____ Copy of State of California CSLB Asbestos Certification

4. _____ Copy of Department of Industrial Relations; Division of Occupational Safety and Health; Certificate of Registration for Asbestos-related Work

5. _____ Copy of signed statement from company officer listing citations and pending proceedings against the Contractor, or if there have been no citations, a copy of the statement that no actions by regulatory agencies have occurred in the last three years signed by an officer of the company.

6. _____ General Liability Insurance Certificate

   a) ___ Occurrence
   b) ___ Asbestos/Lead Activities or Abatement Certificate
   c) ___ Owner Named as Additional Insured
   d) ___ Consultant Named as Additional Insured

7. _____ Auto Insurance

8. _____ Workers' Compensation Insurance

9. _____ Statement of Non-use of Sub-contractors or

   a) ___ Name of Each Sub-contractor
   b) ___ License Number for Each Sub-contractor
   c) ___ General Liability Insurance Certificate for Each Sub-contractor

      1) ___ Minimum Coverage of $1,000,000.00
      2) ___ Owner Named as Additional Insured
      3) ___ Consultant Named as Additional Insured

   d) ___ Auto Insurance Certificate for Each Sub-contractor
   e) ___ Workers' Compensation Insurance Certificate for Each Sub-contractor

      1) ___ Owner Named as Additional Insured
      2) ___ Consultant Named as Additional Insured

10. _____ Written Notification to CAL/OSHA

11. _____ Written Notification to SMAQMD, EPA NESHAP Region IX

12. _____ Copies of City Permits (e.g. Parking or Waste container) or Statement That no Permits are Required

13. _____ Statement That no Equipment Will be Rented for use With Asbestos or a Statement From Each Rental Company Acknowledging Their Equipment Will be Exposed to Asbestos

14. _____ Non-Emergency Telephone Numbers

    a) ___ Local Police Department
    b) ___ Sheriff Department
    c) ___ Fire Department
    d) ___ Emergency Medical Facility and Directions to That Facility From the Site

15. _____ Written Emergency Plans

16. _____ Written Work Plan

17. _____ Written Schedule

18. _____ Worker Documentation (Must Include at Least One Supervisor)

    a) ___ Training Records for Asbestos - AHERA (Supervisor and Worker)*
    b) ___ Medical Examination Written Opinion Final Report for Each Employee*
    c) ___ Respiratory Fit Tests for Each Employee*

19. _____ Equipment list, SDS for all materials to be used on the project, including but not limited to, spray glue, encapsulants, wetting agents, mastic remover, etc.

20. _____ Name of laboratory/person used for PCM analysis and copy of current NVLAP Certificate of Accreditation (if applicable), and most recent AIHA Proficiency Analytical Testing (PAT) Program results.

21. _____ Written Statement That OSHA Monitoring Will be Performed During the Project

22. _____ Manufacturers documentation of 5.0 micron filter capability required for waste water

23. _____ Name of Transporter

24. _____ Hazardous Waste Transporter Registration (if applicable) **Is required only if work to be conducted involves the removal and disposal of "hazardous" asbestos waste as determined either by definition or designated within the Asbestos Abatement Specifications/Procedures and associated attached Exhibits.**

25. _____ Waste Facility Documentation

    a) ___ Name and Site Address
    b) ___ EPA Identification Number (if applicable)
    c) ___ Copy of Current Permit Authorizing Asbestos Waste Receipt and Disposal

26. _____ Signed Copy of Competent Person Form Acknowledging Reading and Understanding the Specifications (Last Page of Forms Sections of Document) This must be signed by the asbestos Contractor/Supervisor who will onsite, not in the contractor's office.

Note: Items 9, 12, 13, and 21 may be addressed in a single letter as applicable.

* No Contractor's worker will be allowed to conduct asbestos related work, enter a containment, or regulated area prior to verification of AHERA, respirator, and medical

documentation. This verification must either be onsite or faxed to Owner's CAC prior to entry.

Part 24.13 - Interim Construction Submittals

Upon request by the Owner or Owner's Representative, the Contractor shall provide copies of documentation identified to be pertinent to the project.

Part 24.14 - Post Construction Submittal List

Contractor shall provide the following post-construction submittals to Owner's Representative within thirty (30) days of the completion of asbestos abatement work.

1. _____ Copies of revised notifications to regulatory agencies.

2. _____ Information on all new workers not covered by the pre-construction submittals and not submitted during the project.

3. _____ A copy of worker exposure monitoring results collected in compliance with DOSH regulations (Title 8 CCR, Section 1529) including daily/representative/full-shift/breathing-zone air samples, and 30-minute excursion samples.

4. _____ A copy of the worker/visitor log showing the following for all persons entering the work area: date, name, social security number, entering, and leaving times, company or agency represented, and reason for entry. The Contractor's time records will not be accepted in lieu of a worker/visitor log.

5. _____ Copies of all accident reports submitted during the course of work. **If no accidents occur during the project this should be stated in writing by the Contractor.**

6. _____ Receipts from the landfill operator acknowledging the Contractor's delivery of wastes, including dates, container types and quantities, tare weights or material delivered, and all appropriate signatures.

7. _____ A complete record of the air filtration devices used certifying DOP testing (if performed) and a circular chart recording, indicating continuous operation and documenting differential air pressure.

8. _____ Copies of DOP Testing Performed on HEPA Equipment not Previously Submitted

9. _____ Manometer graphs identifying project name, date, and location.

10. _____ A copy of the asbestos waste record showing dates, times, manifest numbers, quantities of wastes, types of containers removed from the work area, the hauler, and the signature of the recorder.

11. _____ A Land Disposal Restrictions Notification and Certification

12. _____ Completed Uniform Hazardous Waste forms

13. _____ Other Documents as Requested

SECTION 25. ASBESTOS RESULTS LIST

Any material not specified on the following list which the Contractor encounters at this site must be considered as "suspect" and "assumed" to contain asbestos per US EPA. The only items excluded from this statement are; bare wood, glass, and metal.

Suspect Materials Found or Assumed TO Contain Asbestos Umoja International Academy - Gym Floor Project					
Sample ID#'s	**Suspect Material**	**Asbestos Content/Type (%) by PLM**	**Location**	**NESHAP/ Cal/OSHA Classification**	**Total Estimated Quantity**
n/a	All suspect materials below the wood gym floors (sublayers)	ASSUMED >1% Asbestos	Throughout Gym	CAT-II	Approximately 6,600 Sq. Ft.
n/a	Gray-Brown Carpet with Associated Mastic	ASSUMED >1% Asbestos	At Entryways of Gym Where Found	CAT-II	Approximately 100 Sq. Ft.
n/a	Foam Padding with Associated Mastic	ASSUMED >1% Asbestos	Assumed to be Found Under Existing Flooring Throughout Gym	CAT-II	Approximately 6,600 Sq. Ft.
The gym flooring was not sampled at the request of Eric McMullen with Kitchell, and therefore shall be assumed to contain asbestos greater than 1% until analyzed by an accredited laboratory and proven otherwise. Entek recommends that we return to sample the flooring materials during the initial phase of the project but prior to complete removal of the flooring materials.					

Note 1.: **Category I Non-friable ACM** is asbestos-containing packing, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent asbestos by area.

Note 2.: **Category II Non-friable ACM** is any material, excluding Category I non-friable ACM, containing more than one percent asbestos, which is non-friable such as transite and other concrete based products.

Note 3.: **Regulated Asbestos-Containing Material (RACM)** is any friable material, any Category I non-friable ACM which has become friable, any Category I non-friable ACM which will be or has been subjected to sanding, grinding, cutting, or abrading, any Class II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to a powder by the forces expected to act on the material in the course of demolition or renovation operations.

Note 4.: **Asbestos Containing Construction Materials (ACCM)** is a manufactured construction material containing greater than 0.1% asbestos by weight by the PLM method.

Note 5.: The terms “assume” and “presume” mean the named material is considered positive for containing asbestos and must be treated accordingly, until properly sampled in compliance with 40 CFR, Part 763 Asbestos-Containing Materials in Schools; Final Rule and Notice.

SECTION 26. SITE MAP

SECTION 27. FORMS

Competent Person Acknowledgement

The Cal/OSHA standard for asbestos related construction work, found in 8 CCR, 1529, outlines specific duties and qualifications of the "Competent Person." Find below a overview of these qualifications and responsibilities. The competent person must be authorized by their employer to take prompt corrective measures to eliminate hazards on the job and protect their workers safety. The competent person must be the Supervisor onsite who is capable of:

- Identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees.
- Identifying existing asbestos hazards in the work place and selecting the appropriate control strategy for asbestos exposure.

The duties of the competent persons include, but are not limited to:

- Frequent and regular inspections of the job site, materials, and equipment.
- Supervise or perform the set-up of the regulated area and/or containment.
- Ensure the integrity of the regulated area and/or containment.
- Set up procedures to control entry to and exit from the regulated area and/or containment.
- Supervise all employee exposure monitoring and assure it is conducted according to regulatory requirements.
- Ensure that employees working within the regulated area(s) wear respirators and protective clothing as required by regulation.
- Ensure that employees working set up, use, and remove engineering controls, use work practices and personal protective equipment in compliance with the regulations.
- Ensure that employees use hygiene facilities and observe the decontamination procedures specified in the regulation.
- Ensure through continuing onsite surveillance that engineering controls are functioning properly and employees are using proper work practices.
- Ensure that notification requirements of the regulation are met.

Additionally, the EPA requires the competent person to be trained in the Federal NESHAP regulations, the means to comply with them, and be on site during all removal operations.

I _____ have the authority to take prompt corrective measures to eliminate hazards on the job and protect workers safety. Furthermore, I have read and understand my duties as outlined above and under the applicable regulations, and will exercise them to best of my ability.

_____ Date: _____ Employer: _____
Signature of Competent Person Who Will Be Onsite

_____
Printed Name of Competent Person Who Will Be Onsite

C:\Users\JoseHernandez\Entek Consulting Group, Inc\Entekgroup - Documents\Clients\Sacramento City USD\26-8135 Umoja Intl Academy, Gym - AsbPb\Specs\Asbestos Specs Umoja Gym 5-5-26.wpd

REQUIREMENTS FOR DISTURBANCE OF LEAD IN CONSTRUCTION
TABLE OF CONTENTS

PART 1.0 GENERAL REQUIREMENTS. 1
- 1.1 Introduction.. 1
- 1.2 Definitions.. 2
- 1.3 Regulatory Compliance. 7
  - 1.3.1 Environmental Protection Agency (EPA).. 7
  - 1.3.2 Housing and Urban Development (HUD). 7
  - 1.3.3 California Department of Public Health (CDPH). 8
  - 1.3.4 California Occupational Safety and Health Administration (Cal/OSHA). 8
- 1.4 Lead-Work Pre-Job Notification Requirements. 9
- 1.5 Lead Training Requirements. 10
  - 1.5.1 Minimal Training Required For All Workers Exposed To Lead.. 10
  - 1.5.2 Required Training For Those Exposed Over the Action Level Or Who Conduct Trigger Tasks. 11
  - 1.5.3 Required Training For Those Who Are Reasonably Expected To Be Exposed Over The PEL And/Or Conduct Trigger Tasks On Over 100 Square Feet of Material. 11
  - 1.5.4 Required Training for Projects Involving Disturbance of Lead-Based Paint in Child Occupied pre-1978 Homes, Child Care Facilities and Pre-schools. 12
- 1.6 Required Submittal Documents. 12
  - 1.6.1 Submittals Prior To The Start Of Work. 12
  - 1.6.2 Submittals Provided During The Work Or Following Completion Of The Work If Applicable. 15
- 1.7 Third-party Oversight. 16
- 1.8 Air Sampling By The Owner and/or Project Monitor.. 16
- 1.9 Notification of Employers of Employees in Adjacent Areas. 18
- 1.10 Suspension Of Work. 18
- 1.11 Pre-Start Meeting. 18
- 1.12 Testing For Lead In Paints, Coatings, Ceramic Tile, And Other Materials.. 18

PART 2.0 MATERIALS AND EQUIPMENT. 19
- 2.1 Fire Resistant Plastic Sheeting (Poly). 19
- 2.2 Challenge Testing Of HEPA Filtration Systems. 19
- 2.3 Vacuum-Assisted Tools. 19
- 2.4 Power Washing. 19
- 2.5 Personal Protective Equipment. 20
- 2.6 Rental Equipment.. 20

REQUIREMENTS FOR DISTURBANCE OF LEAD IN CONSTRUCTION
TABLE OF CONTENTS

PART 3.0 EXECUTION. 20
3.1 Summary. 20
3.2 Compliance With Requirements For The PEL and Action Level. 22
3.2.1 Personal Air Sampling.. 22
3.3 Work Involving Whole Component Removal Or Demolition Of Entire Structure. 23
3.4 Prohibited Work Practices. 23
3.5 Competent Person. 23
3.6 Work Site Preparation & Containment Requirements. 24
3.6.1 Exterior Work Site Preparation & Containment.. 24
3.6.2 Interior Site Preparation & Containment. 25
3.6.3 Additional Containment Requirements For Demolition Of Ceramic Tile And/Or Mechanical Disturbance Or Blasting Of Lead-Containing Materials Without A HEPA-Filtered-Vacuum Recovery System. 26
3.6.4 Decontamination Procedures. 29
3.6.5 Avoiding Contamination Of Adjacent Areas By Proper Decontamination. 30
3.6.6 Approval Prior To Start Of Work. 30
3.7 Wet Work Practices. 30
3.8 Prompt Cleanup Of Debris. 30
3.9 Final Cleanup Of The Work Area.. 31
3.9.1 Exterior Work Areas. 31
3.9.2 Cleanup Of Interior Work Areas. 31
3.10 Final Inspection Of The Work Area. 31
3.11 Power Washing of Exterior Building Surfaces. 33
3.11.1 Waste Water Discharge Permits.. 33
3.11.2 Required Work Practices For Power Washing. 33
3.12 Lead Waste Management. 34
3.12.1 Lead Waste Testing. 36
3.12.2 Uniform Hazardous Waste Manifests. 36
3.12.3 Waste Containers. 36
3.13 Alternative Work Plans.. 37

PART 4.0 DOCUMENTATION SUBMITTAL REQUIREMENTS. 37

PART 5.0 RESULTS OF LEAD TESTING. 42

REQUIREMENTS FOR THE DISTURBANCE OF LEAD IN CONSTRUCTION

PART 1.0 GENERAL REQUIREMENTS

1.1 Introduction

These specifications are designed to minimize and control potential lead hazards during the disturbance of materials that contain lead. These procedures and precautions apply to the disturbance of lead that may result from the preparation of surfaces prior to painting, from the drilling into, cutting into, or removal of building components containing or covered with lead, or the demolition of buildings and/or structures that contain lead either in or on their surfaces.

The primary focus of these specifications is to address the work practices and procedures that the Contractor and/or other subcontractors must follow when conducting activities that may disturb lead in paint or other coatings or lead in ceramic tile glaze.

An asbestos inspection was conducted by Entek Consulting Group, Inc. for the Umoja International Academy Gym Flooring Renovation Project and a report was prepared on May 5, 2026. The report will include all suspect building materials that were sampled and analyzed for asbestos and included an assessment for lead in paint. Limited testing was conducted at the site to determine concentrations of lead on building surfaces. Attached are the results of X-Ray Fluorescence analysis in Part 5.0 Results of Lead Testing.

Given the age of the building on this project, lead in measurable amounts is common in paint, varnish, stains, and ceramic tile. Limited testing was conducted at the site to determine concentrations of lead on building surfaces or materials. All interior and exterior painted, stained or varnished building surfaces are assumed to contain various concentrations of lead unless proven otherwise via laboratory analysis. The Contractor or other subcontractors may also encounter other building products such as lead sheeting, roof flashing or roof vents that may, in his or her judgement, be assumed to contain lead until proven otherwise.

The Contractor and other subcontractors working on this project must treat these suspect lead-containing products as containing lead unless the material is tested and proved to not contain lead by Entek Consulting Group, Inc. (Entek). Unless tested, Cal/OSHA regulations will apply if any of these surfaces or materials will be disturbed during the project work.

Entek anticipates enforcing Cal/OSHA and California Department of Public Health (CDPH) regulations regarding the training of workers disturbing lead and the containment and work practices utilized during that disturbance. The training requirements for workers and supervisors on this project are summarized in Part 1.5. Lead Training Requirements. The Contractor and other subcontractors disturbing lead must be familiar with the CDPH requirements regarding containment of lead debris and the Cal/OSHA lead in construction standard. Those requirements are summarized below in Part 1.3 Regulatory Compliance.

In summary, the Contractor and subcontractors shall utilize engineering controls to limit the release of lead dust or debris. These engineering controls may include, but are not limited to, using wet methods, using tools with vacuum recovery systems with High Efficiency Air Particulate (HEPA) filtration, using vacuums with HEPA filtration, using negative air pressure differential systems, and by the prompt clean up of any lead-containing debris that the work might produce. Dry scraping, sanding, grinding, or abrading lead-containing materials is not permitted. All work that disturbs lead will require a containment. The containment may be as simple as plastic sheeting on the floor or ground when drilling minor penetrations or scraping paint on exterior surfaces. Or, for the demolition of ceramic tile and any painted wall systems, it is likely to require the Contractor construct a full containment for the area and utilize a negative air pressure differential system. The

requirements for work practices and containment are described in Part 3.5 Work Site Preparation & Containment Requirements.

The requirements of this specification apply to all employers who have employees who may reasonably be exposed to lead on this project. This includes the Contractor, who will normally be an environmental contractor such as an asbestos abatement contractor, or a painting contractor utilizing CDPH lead certified workers and supervisors. In addition, this specification applies to all subcontractors conducting work on this project who have employees who may disturb lead by drilling, cutting, scraping, or demolishing materials containing lead.

No Contractor shall begin work which will disturb known or suspect lead-containing surfaces or materials in a manner that may expose a worker to lead containing dust, create a potential for building contamination, or create possible lead containing waste, until all required pre-construction documentation has been reviewed and written approval has been received from the Owner and/or Project Monitor.

Activities expected to disturb lead-containing materials include, but are not limited to, painting preparation work such as scraping or sanding, penetration of painted surfaces through drilling or cutting, demolition of painted surfaces, removal of painted building components, and removal, drilling, or cutting of ceramic wall tiles. If the Contractor or subcontractors are observed conducting such activities without having written approval from the Owner and/or Project Monitor, they will be instructed to stop work. Work will not be allowed to resume until the Owner and/or Project Monitor provides approval for the work to begin.

This project involving potential disturbance of lead in the various painted materials is not considered a lead abatement project. The renovation project at this site would be considered “lead related construction work”; therefore, it is Entek’s opinion the contractor is not required to submit a CDPH Form 8551 for this project.

1.2 Definitions

Action Level - Airborne exposure to lead at or above 2 $\mu g/m^3$ over an eight-hour-time-weighted average as discussed in 8 CCR 1532.1. Typically, when employees are exposed over the Action Level, the employer must provide blood testing, training in compliance with 8 CCR 1532, and air sampling.

Air Filtration Unit - A portable exhaust system equipped with HEPA filtration and capable of maintaining a constant low velocity air flow into contaminated areas from adjacent uncontaminated areas. At a minimum, the air intake for the air filtration device must have a pre-filter on it which can be changed within the containment area. In most cases, air filtration devices will need to pass challenge testing by DOP before they are allowed to be used on site.

Airlock - A system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area, typically consisting of two curtained doorways separated by a distance of at least three feet such that one passes through one doorway into the airlock, allowing the doorway sheeting to overlap and close off the opening before proceeding through the second doorway, thereby preventing flow-through contamination.

Air Monitoring - The process of measuring the content of a known volume of air collected during a specific period of time.

Blood Testing - Blood testing for lead and zinc protoporphyrin in compliance with the requirements for medical surveillance as listed in 8 CCR 1532.1.

Cal/OSHA - California Division of Occupational Safety and Health. A California agency that implements and enforces numerous health and safety standards regarding lead.

Certified Lead Supervisor and Worker - Supervisors and workers currently certified by the California Department of Public Health (CDPH).

Challenge Testing - Process used to verify that HEPA-filtered equipment does not leak or exhaust asbestos, lead, or other particulate. This testing must be done by a testing company, not affiliated with the Contractor, and approved by the Owner and Project Monitor. Challenge testing normally uses an oil mist as the challenge agent and measures how much, if any, of the agent is exhausted from the machine being tested.

Clean Room - An uncontaminated area or room which is a part of the worker decontamination enclosure system with provisions for storage of workers' street clothes and clean protective equipment. The term also includes the uncontaminated area or room of a Waste Transfer Airlock.

Containment - Isolation of the work area from the rest of the building to prevent escape of lead in dust, debris or in the air.

Contractor - The Contractor is the person or entity identified as such in the Contract Documents as being responsible for the environmental work as done in response to and in accordance with this document. References to the "Contractor" include the Contractor's authorized representatives. The Contractor may be a sub-contractor to the Primary Contractor. The Contractor normally will be responsible for paint preparation work that disturbs lead, paint scraping done prior to the demolition of structures, or the demolition of ceramic tile. The Contractor will typically need to use CDPH certified lead workers and supervisors to conduct their work that disturbs lead. Those employers disturbing smaller amounts of lead such as through drilling, cutting, or small component removal are typically known as a subcontractor for the purposes of this specification.

Critical Barrier - Critical Barriers are used to restrict water and airflow. Critical Barriers are the barriers placed over openings in the walls and ceilings of a work area in order to ensure that lead dust cannot escape the work area via these openings. Unless otherwise specified in these Specifications, critical barriers shall be constructed of at least one layer of six-mil thick poly.

Curtained Doorway - A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms. These are typically constructed by placing two overlapping sheets of plastic over an existing 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 are permissible as long as they are approved by the Project Monitor.

Decontamination Enclosure System - A series of connected rooms, separated from the work area and from each other by air locks, for the decontamination of workers, containers, and equipment. This unit shall be constructed with at least two layers of six mil poly for the floors, walls, and ceiling. The floor of the dirty room shall consist of two layers of six mil poly plus a third layer of poly, four mil or thicker, to be used as a removable drop layer. Drop layer is to be removed as needed, but at least daily.

CDPH - California Department of Public Health. State agency that regulates the disturbance of lead in public buildings and on all structures in California. This agency and relevant regulations are primarily concerned with preventing childhood lead poisoning.

DOP - Dioctylphthalate particles, a testing agent for the efficiency of HEPA filters.

DOT - Department of Transportation, a Federal agency which has regulations and labeling requirements for the transportation of hazardous waste.

DTSC - Department of Toxic Substances Control, a department within the California Environmental Protection Agency charged with implementing and enforcing hazardous waste regulations.

Dust or Debris - Any visible dust or debris remaining in work area will be considered lead-containing residue.

Entek - Entek consulting Group, Inc. This is the Lead Project Monitoring/Management Firm for this project, and is the employer of the Project Monitor used on this project.

EPA - U.S. Environmental Protection Agency, a Federal agency that developed and enforces various asbestos and lead regulations.

HVAC - Heating, ventilation and air conditioning system.

HEPA Filter - A high efficiency particulate air filter capable of removing particles 0.3 microns in diameter from an air stream with 99.97% efficiency.

HEPA-Filtered-Vacuum Recovery System - This is a mechanical tool that has a shroud or covering over the area of a surface disturbed by a mechanical system in order to eliminate or significantly reduce the amount of dust released to the ambient air by the mechanical process. The shroud must be attached to a working vacuum with HEPA filtration.

HEPA Vacuum - A vacuum system equipped with HEPA filtration. Typically these units will need to be challenge tested before being allowed to be used inside of buildings on this project.

Lead-Based Paint - Materials meeting the definition of lead-based paint as defined by the California Department of Public Health and the United States Environmental Projection Agency. Currently defined as containing lead in concentrations equal to or greater than 1.0 mg/cm^2, 5000 ppm, or 0.5% by weight.

Lead-Containing Material - Materials that contain measurable, quantifiable amounts of lead. The disturbance of these materials is regulated by Cal/OSHA.

Lead-Containing Hazardous Waste - Materials required by the State of California to be packaged, labeled, transported, and disposed of as a lead hazardous waste.

Lead-Containing Waste Material - Lead-containing waster material that does not need to be treated as a lead-containing hazardous waste.

Lead Project Management or Monitoring Firm – The firm hired by Owner to provide third-party oversight of the disturbance of lead performed on the Owner's property by the Contractor or subcontractors.

Mil - A unit of length or thickness equal to one thousandth of and inch. Generally used when referring to the thickness of plastic (poly) sheeting used to contain the regulated area.

Movable Object - An unattached piece of equipment or furniture in the work area which can be removed from the work area.

Negative Air Machines - See Air Filtration Units.

NIOSH - The National Institute for Occupational Safety and Health. All respirators used on this project must be approved by NIOSH.

Outside Air - The air outside buildings and structures.

Owner - Property owner where the disturbance of lead will take place. For example, this may be a private building owner or manager, a government body such as a city or county agency, a military base, or a Owner district. This includes the Owner's authorized representatives and employees.

PEL - Permissible Exposure Limit (as used in 8 CCR 1532.1)

Permissible Exposure Limit (PEL) - Airborne exposure to lead above 10 $\mu g/m^3$ over an eight-hour, time-weighted average as discussed in 8 CCR 1532.1. Typically, when employees are exposed over the PEL, the employer must provide blood testing, respirators, protective clothing, shower decontamination, CDPH certification, regulated areas, and air sampling.

Poly - Flame-retardant polyethylene sheeting used to seal critical barriers, create cleaning barriers and drop layers, and to protect surfaces from damage or contamination.

Primary Contractor - The Contractor may not work directly for the Owner but instead subcontract with another contractor such as a general contractor or demolition contractor. The Primary Contractor is the entity responsible for hiring the Contractor if it is not the Owner.

Pre-start Meeting - Meeting held before the beginning of the project in which final details of the project are discussed and Contractor provides project monitor with pre-job submittal packet.

Project Monitor - An individual qualified by virtue of experience and education, designated as the Owner's representative and responsible for overseeing the work that disturbs lead on this project.

Project Monitoring - Activities undertaken by the Project Monitoring Firm for the purpose of monitoring the work done by the Contractor on this project in regards to the disturbance of lead.

Regulated Area - Term used by Cal/OSHA in 8 CCR 1532.1 to indicate a work area where exposure to airborne lead might exceed the Permissible Exposure Limit or where "Trigger Activities" may be performed. The area must be demarcated with signs and barriers designed to keep unauthorized people out of the area. Additionally "Regulated Area" means any measure used to restrict access to an area where personnel impacting lead-containing materials are required to wear respiratory protection and/or protective clothing by the project specifications regardless of airborne concentration of lead.

Renovation, Repair and Painting Program (RRPP) - US EPA 40 CFR Part 745 Lead-Based Paint (LBP) Poisoning Prevention in Certain Residential Structures. Regulations apply where there will be disturbance to lead-based paint in homes, child care facilities and pre-schools in child occupied facilities.

Shower Room - A room between the clean room and the equipment room in the decontamination enclosure with hot and cold or warm running water controllable at the tap and suitably arranged for complete showering during decontamination. Unless specified elsewhere in these specifications, or determined otherwise by the program monitor, the shower shall be on a metal pan to contain water splashed, leaked or spilled out of the shower unit.

Specifications - These written requirements describing procedures the Contractor must follow for this project.

Subcontractor - Contractors working for the Primary (General) Contractor but who are not primarily responsible for environmental work. For example, they may be responsible for, demolition, electrical, plumbing, general construction, minor painting, or other special trades.

Submittals - Pre-construction, interim construction, and post construction documents submitted by the contractor to the Owner as indicated in General Requirements and Bidding Requirements.

Trigger Task - Term commonly used to describe the tasks described by Cal/OSHA in 8 CCR 1532.1 (d)(2). These are tasks or activities that Cal/OSHA believes are expected to result in airborne exposures over the PEL until air monitoring proves otherwise. In brief, trigger tasks include manual demolition, scraping, sanding, using HEPA-attached equipment, using heat guns to remove lead paint, welding, torch cutting, and using other more aggressive techniques. (This is a summary list and does not list all tasks that are considered trigger tasks.) In addition, trigger tasks include any activity reasonably expected to result in airborne exposures to lead above the Permissible Exposure Limit.

View Ports - Clear windows into the regulated work area that allow authorized persons to view work activities inside the regulated area without entering the area. The view ports must be of sufficient number, constructed of materials of sufficient clarity, and be located in areas determined and/or approved of by the Project Monitor. All regulated work areas including mini-enclosures will require view ports unless specifically determined not to be feasible by the Project Monitor.

Visible Emissions - Any emissions containing particulate material that are visually detectable without the aid of instruments. For example, dust, debris, and water leaks are considered visible emissions.

Waste Load-out/Transfer System - A decontamination system utilized for transferring containerized waste from inside to outside of the work area. A series of connected rooms used for the load-out of lead-containing materials that have been properly containerized.

Waste Bags - Waste bags for lead-containing waste must be a minimum of six-mil thickness. In general, double bagging will be required.

Waste Containers - Waste containers are the containers into which lead-containing waste is placed. They may be bags of at least six-mil thickness, metal or fiber barrels, or other containers such as cardboard boxes approved by the Project Monitor. The Contractor is responsible for assuring that the type of container chosen is acceptable to the waste landfill to which the waste will be transported. Waste containers must be labeled according to the requirements of the California Department of Occupational Safety and Health (Cal/OSHA), Department of Toxic Substances Control (DTSC), Department of Transportation (DOT), and the Environmental Protection Agency (EPA).

Waste Transfer Airlock - A decontamination system utilized for transferring containerized waste from inside to outside of the work area.

Wet Cleaning - The process of eliminating lead contamination from building surfaces and objects by using cloths, mops, or other utensils which have been dampened with water and afterwards thoroughly decontaminated or disposed of as lead-contaminated waste.

Work Area - Designated rooms, spaces, or areas of the project in which the disturbance of lead is to be undertaken or which may become contaminated as a result of such action. A contained work area is a work area which has been sealed off from adjacent areas.

Work Plan - Contractor's written plan describing how the Contractor will perform the work in compliance with these specifications. The work plan shall include information on preparation of the work area, personal protective equipment, employee experience, training and assigned responsibilities during the project. It will also list decontamination procedures for personnel, work area and equipment, removal methods and procedures, required air monitoring program, procedures for handling and disposing of waste materials and procedures for final decontamination and cleanup.

Worker - A person who successfully meets the training requirements for the disturbance of lead as described in these specifications.

8 CCR 1532.1 - Chapter 8 of the Labor Code, California Code of Regulations, Section 1532.1: Lead (Known as the Lead Standard for the Construction Industry)

8 CCR 1544 - Chapter 8 of the Labor Code, California Code of Regulations, Section 1544: Respiratory Protection Standard.

1.3 Regulatory Compliance

Various agencies regulate work that disturbs lead-containing materials. The following is a summary of the most important agencies and regulations that apply during the disturbance of lead during construction work. This list is not to be considered comprehensive. The Contractor is responsible for complying with all applicable federal, state, and local regulations that may apply to the specific work they are conducting.

1.3.1 Environmental Protection Agency (EPA)

Lead: Identification of Dangerous Levels of Lead; Final Rule (40 CFR Part 745 Subpart D)

The EPA defines lead-based paint as paint and coatings that contain lead in concentrations equal to or more than one milligram per square centimeter (1 mg/cm^2), 5000 parts per million (5000 ppm), or one half of one percent (0.5%) by weight. EPA regulations apply to all housing and child-occupied facilities built before 1978. When the term "lead-based paint" is used in the context of these specifications, the term is used only to refer to paint that contains lead in concentrations equal to or greater than that defined by the EPA as lead-based paint. This is to differentiate lead-based paint from the term "lead-containing paint" as used for compliance with Cal/OSHA.

1.3.2 Housing and Urban Development (HUD)

Requirements for Notification, Evaluation and Reduction of Lead-Based Paint Hazards in Federally Owned Residential Property and Housing Receiving Federal Assistance (24 CFR Part 35)

The HUD Rule for Federal Housing (shortened name) applies to all residential properties built before 1978 that receive Federal financial assistance. This regulation uses the same definition of lead-based paint as the EPA. The work practices and procedures described in these specifications are designed to comply with occupant and worker protection regulations as mandated by OSHA and Cal/OSHA regulations for work that disturbs lead and **are not** designed to comply with all the requirements of 24 CFR Part 35. Should this project be covered by this regulation, the Owner may require additional practices and procedures in the scope of work for activities conducted in properties covered by the HUD Rule for Federal Housing.

1.3.3 California Department of Public Health (CDPH)
Accreditation, Certification, and Work Practices For Lead-Based Paint And Lead Hazards (Title 17, CCR, Division 1, Chapter 8, Sections 35000-361000)

This regulation primarily applies to residential and public buildings located in California. The definition of a public building is one that is "generally accessible to the public." Some aspects of this regulation, particularly those that pertain to the definition of "presumed lead-based paint" and the containment requirements for disturbing lead-based paint **apply to all structures** in California.

This CDPH regulation definition of lead-based paint is identical to the EPA/HUD definition of 1 mg/cm^2, 5000 ppm, and 0.5% by weight. In addition, this regulation requires all paint on structures in California to be treated as "presumed lead-based paint" unless the paint is on a home built after 1978 or a Owner built after 1992. Therefore, the paint in all owner's buildings covered by this project that were constructed before 1993 must be treated as lead-based paint unless tested and proved otherwise as described elsewhere in these specifications.

The CDPH regulation differentiates between work that disturbs lead as part of renovation or maintenance work and work that disturbs lead as part of "abatement" work as defined in Title 17. The work practices and procedures described in these specifications are designed to comply with occupant and worker protection regulations as mandated by Cal/OSHA regulations for work that disturbs lead as part of renovation, demolition, and maintenance work. These specifications are not designed to comply with the requirements for abatement as defined in the CDPH Title 17 regulation. Unless stated specifically otherwise in these specifications, the Owner does not anticipate any work being done as part of this project that meets the definition of abatement as used in Title 17. Therefore, unless specifically directed otherwise by this specification or by the direction of the Owner and/or Project Monitor, the Contractor and/or subcontractors shall NOT submit Form 8551, "ABATEMENT OF LEAD HAZARDS," to the CDPH since that form provides inappropriate notice for the work done on this project. The Contractor may be required to complete and submit this form should the scope of the work or the work practices change.

This regulation has significant penalties associated with the creation of "lead hazards." Lead hazards are defined as: "...disturbing lead based paint or presumed lead-based paint without containment, or any other nuisance which may result in persistent and quantifiable lead exposure." The requirements discussed in Part 3.5 Work Site Preparation & Containment Requirements are designed to meet CDPH requirements. Should a Contractor and/or subcontractor conduct work without a containment or release lead-contaminated dust or debris outside of the containment, they are in violation of this regulation. The Project Monitor will stop all work, consider the Contractor and/or subcontractor to be in violation of these specifications and the contract documents. Work will not be allowed to begin again until the Contractor and/or subcontractor takes adequate steps to correct their violation and convinces the Owner and/or Project Monitor that the violation will not occur again.

1.3.4 California Occupational Safety and Health Administration (Cal/OSHA)
Lead Standard for the Construction Industry (8 CCR 1532.1)

This standard regulates work done by employees who may disturb lead as part of demolition, construction, renovation or maintenance work. Painting activities that may disturb lead are covered by this standard. General construction work that disturbs lead is covered, as is the demolition of building components or entire structures.

Cal/OSHA regulates lead whenever lead is determined to exist in a material. When the term "lead-containing paint" is used in the context of these specifications, the term is used to refer to paint that

contains lead in an amount equal to or above the reporting limit for the laboratory analysis or that detected by an X-ray Fluorescent Analyzer (XRF).

In addition, Cal/OSHA uses the EPA/HUD/CDPH definition of lead-based paint (1.0 mg/cm^2, 5000 ppm, or 0.5% by weight) for their pre-job notification requirements discussed in Part 1.4 Lead-Work Pre-Job Notification Requirements.

The following information summarizes the significant requirements in the Cal/OSHA standard. This summary is not meant to substitute for the Contractor reading and being familiar with the Cal/OSHA requirements.

a. The Cal/OSHA lead standard is very complex. Cal/OSHA regulates lead in materials when a laboratory can quantify the amount of lead. This means materials are regulated even when they contain very small amounts of lead. The standard sets an "Action Level" for airborne lead at or above 2 µg/m^3 over an eight-hour-time-weighted average. Typically, if employees are expected to be exposed to this airborne lead level, the employer must conduct air sampling, provide blood lead testing, and provide specialized training. The standard sets a "Permissible Exposure Limit" or "PEL" for airborne lead at or above 10 µg/m^3 over an eight-hour-time-weighted average. The employer must continue the requirements needed at the Action Level but must now provide respirators, protective clothing, a shower decontamination system, and a written compliance program.

b. In 8 CCR 1532.1 (p), employers are required to notify Cal/OSHA before employees conduct a trigger task that will disturb more than 100 square or linear feet of material that contains lead in concentrations equal to or above 1.0 mg/cm^2, 5000 ppm, or 0.5% by weight. The notification also applies to welding or torch cutting that takes more than one hour in a shift. Trigger tasks are described in 8 CCR 1532.1 (d)(2). In brief, they include manual demolition, scraping, sanding, using HEPA-attached equipment, using heat guns to remove lead paint, welding, torch cutting, and using other more aggressive techniques. This is a summary list and does not list all task that are considered trigger tasks.

c. The California standard defines lead-containing paint at the Consumer Product Safety Commission's (CPSC) level of 0.06% by weight or 90 ppm for non-trigger tasks. The lead standard would not apply if the paint contains less than 90 ppm and the employees do not conduct trigger tasks. However if the employees do conduct trigger tasks, the entire standard applies.

d. Cal/OSHA requires CDPH lead training and certification for any supervisors or workers who are "shown to be exposed" to airborne lead levels above the PEL in residential or public buildings. The Owner and Project Monitor believe that there is a reasonable expectation that those workers scraping paint prior to repainting, and those demolishing ceramic tile are likely to be exposed over the PEL. Therefore, on this project, that work must be done by CDPH certified workers and supervisors.

e. Cal/OSHA requires the supervisor to establish a "regulated area" whenever employees may be exposed to airborne lead over the PEL or if they will perform trigger tasks as defined in 8 CCR 1532.1 (d)(2). The establishment of regulated areas is discussed in Part 3.5 Work Site Preparation & Containment Requirements.

1.4 Lead-Work Pre-Job Notification Requirements

The Contractor is responsible for complying with the Lead-Work Pre-Job Notification as specified in 8 CCR 1532.1 (p). If notification is required for this project, the Contractor must provide the notification to Cal/OSHA and provide a copy of this notification to the Owner and/or Project Monitor as part of the Contractor's pre-work submittal package.

Unless the material is tested as described elsewhere in these specifications, the Contractor and subcontractors must anticipate notifying Cal/OSHA if they plan to manually demolish or perform another type of trigger task (such as paint scraping or sanding) on any painted surface or ceramic wall surface on this project if the amount of material to be disturbed equals or is greater than 100 square feet.

Notification to Cal/OSHA is not required if the paint on the painted surface is primarily intact (not loose and peeling) and the painted material is removed in a manner that does not disturb the paint. For example, door or window frames may be removed without providing the notification if the paint or coating on the frames is intact and the building components can be removed without significantly disturbing the coating.

Unless stated otherwise in these specifications, or directed otherwise by the Project Monitor, the Contractor and/or subcontractors shall NOT submit Form 8551, "ABATEMENT OF LEAD HAZARDS," to the CDPH since that form provides inappropriate notice for the work done on this project since no lead "abatement" as defined by CDPH will be conducted as part of this project.

1.5 Lead Training Requirements

At a minimum, the Contractor and subcontractors must meet the lead training requirements as specified by 8 CCR 1532.1. This will include training all employees who drill, cut, scrape, abrade, remove, clean up debris, or in any other way are exposed to lead from painted surfaces or ceramic tile found on the buildings or structures covered by this project. The different types of training are summarized below for the typical types of work that are expected to disturb lead on this project.

1.5.1 Minimal Training Required For All Workers Exposed To Lead

This training will be sufficient for those who disturb lead in only minor ways. Those disturbing lead in more significant amounts will need to meet the training requirements stated in Part 1.5.2 or 1.5.3.

For example, this training applies to those workers who, for a total of less than one hour in an eight-hour shift, will drill or cut through painted surfaces, remove painted components (when the paint is intact), or remove ceramic tile significantly intact. *This time frame is guidance and not an official Cal/OSHA time frame. This time frame is suggested because it is thought that these tasks, done for such a short time frame, do not pose a realistic chance that workers will be exposed over the Action Level based on an eight-hour time-weighted average.* In some cases, however, depending on the surface and type of work being conducted, the Project Monitor may determine that more training is needed even if the worker disturbs lead for less than an hour. In general, workers with this training conducting this type of minimal disturbance of lead will not need to wear respirators while conducting this work.

The training must comply with the training requirements as listed 8 CCR 1532.1(l)(1)(A). In summary, this training must comply with Hazard Communication Training for lead as discussed in 8 CCR 5194. This training is also known as "hazard communication," or "lead awareness" training and is usually done in less than hour depending on the work the employee will conduct.

The Contractor and subcontractors will need to provide the Owner and/or Project Monitor written proof that this training has been provided before workers will be allowed to conduct work that disturbs lead even in minimal amounts. Entek can provide this training for the Contractor and/or subcontractors or they can obtain this training from any source the employer believes is qualified.

Proof of this training is not required if the employees are trained to the levels listed in Part 1.5.2 and/or 1.5.3.

1.5.2 Required Training For Those Exposed Over the Action Level Or Who Conduct Trigger Tasks

This training must be done for all those workers who conduct trigger tasks or are expected to be exposed above the Action Level. Typically, this training will be required for workers who conduct a trigger task such as paint scraping or manual demolition of painted components and the work will take more than one hour in an eight-hour shift. *This is a guidance and not an Cal/OSHA time frame.* The Project Monitor may determine that this training is needed for some workers who conduct tasks for even less than an hour.

The training must comply with the training requirements as listed 8 CCR 1532.1 (l)(1)(B) and (l)(2)(A-H). In summary, the standard requires the worker to be trained in series of subjects. The length of training depends on the experience and previous training of the worker, the type of work they will conduct, and whether or not they already have been trained and approved to wear respirators. Workers receiving this training and conducting this type of work will typically need to wear respirators and protective clothing while they conduct the work.

An environmental contractor, or a contractor with environmental work experience, previous training, and a written respiratory protection program generally conducts this type of work. The Owner and Project Monitor do not recommend subcontractors attempt this type of work. However, subcontractors will be allowed to conduct this type of work on this project if they can demonstrate proof of training and carry out the work according to these specifications.

The Contractor and subcontractors will need to provide the Owner and/or Project Monitor written proof that this training has been provided all workers conducting the tasks that require this training. Entek can provide this training for the Contractor and/or subcontractors or they can obtain this training from any source the employer deems is qualified.

This training is not required if the employees are trained to the levels listed in Part 1.5.3.

1.5.3 Required Training For Those Who Are Reasonably Expected To Be Exposed Over The PEL And/Or Conduct Trigger Tasks On Over 100 Square Feet of Material

Workers and supervisors must be CDPH Certified Lead-Related Construction Workers or Supervisors if they will conduct trigger tasks or other work reasonably expected to exceed the PEL and/or conduct this work on over 100 square feet of material. *This is a guidance amount and not a Cal/OSHA regulatory requirement. However this amount of material and type of work is reasonably expected to potentially release airborne exposures over the PEL and thus trigger the CDPH certification requirement.* This includes work such as the manual demolition of painted surfaces, ceramic walls, paint preparation work (sanding and scraping), and other tasks as described in 8 CCR 1532.1 (d)(2). Proof of training will be a currently valid CDPH certification card. Workers who can show a completed course completion form and a completed application form for certification will be allowed to work pending their being fully certified.

Exception: Licensed asbestos contractors performing paint scraping work on the outside of buildings only for the purpose of removing loose and peeling paint prior to the demolition of the building, or the demolition of a structure, will not be required to have the workers or on-site supervisor be CDPH certified. They must, however, show proof of training in compliance with 8 CCR 1532.1 (l)(2) for employees who may be exposed above the Action Level. In summary they must meet the training requirements of this specification as stated in Part 1.5.2. In addition, however, the Contractor must have a CDPH certified supervisor approve the containment setup at the start of each shift that will disturb lead, approve the work practices and personal protective equipment worn by the workers, verify that proper air monitoring is being collected, must be able to return to the site within two hours if requested by the Project Monitor, and must approve the final cleanup of the work area prior to a visual inspection of the work area being conducted by the Project Monitor. The certified supervisor will always be required to approve the initial set up of the containment, personal protection, and work practices at the start of the job, but then depending on the quality of the work demonstrated, the Project Monitor may not require the certified supervisor to inspect the work site at the start of each shift. This exemption will be revoked should air sampling on this project demonstrate airborne lead levels above the Action Level on workers or supervisors.

1.5.4 Required Training for Projects Involving Disturbance of Lead-Based Paint in Child Occupied pre-1978 Homes, Child Care Facilities and Pre-schools

Workers and supervisors must be trained in accordance with the US EPA RRP regulations for painting activities.

1.6 Required Submittal Documents

While additional documents may be required by the scope of work for this project, at a minimum, the Contractor will be required to provide the Owner and/or Project Monitor with the following documents regarding the Contractor's ability to safely disturb lead-containing materials.

1.6.1 Submittals Prior To The Start Of Work

All Contractors and subcontractors who will have employees disturb lead on this project must, at a minimum, provide proof of item number 1.6.1.e.1., lead hazard communication training in compliance with 8 CCR 1532.1 (l)(A)(1). This is the only submittal that must be provided by these employers as long as they do not disturb conduct more disturbance of lead than is described in Part 1.5.1.

The following submittals must be provided by all Contractors and subcontractors who will, at a minimum, have employees who will conduct trigger tasks for more than one hour per shift, will potentially be exposed above the Action Level, or will conduct other activities as determined by the Project Monitor that may result in significant exposure to lead.

a. A written lead compliance plan in compliance with 8 CCR 1532.1 must be provided that includes the following:

   1. A description of equipment and materials, controls, crew size, job responsibilities, and operations and maintenance procedures for each activity in which lead is disturbed and potentially emitted;

   2. A description of specific control methods (wet methods, engineering controls, etc.) that will be used to ensure workers are not exposed above the PEL;

3. Technology considered in meeting the Cal/OSHA permissible exposure level (PEL);

4. Air monitoring data documenting sources of lead emissions;

5. A detailed implementation schedule for the compliance plan, including the schedule for inspections by a competent person;

6. A description of the lead work practice program which will be used to control worker exposures. This includes the use of protective work clothing, equipment, hygiene facilities and practices, and housekeeping practices;

7. A description of the steps the Contractor or subcontractor will take to minimize the generation of hazardous waste produced on this project. This includes, but is not necessarily limited to how the contractor will separate waste streams. For example, how will the Contractor or subcontractor keep potentially hazardous waste such as paint chips and dust from being disposed of with other potentially non-hazardous construction materials and debris?

Note: If a Contractor or subcontractor is found conducting lead-related work not specifically mentioned and described in the compliance plan, the work will be stopped until a compliance plan including that work is submitted, reviewed, and approved by the Owner and/or Project Monitor.

b. Copy of the Contractor or subcontractor's written respirator program in accordance with the requirements of 8 CCR 1544.

c. Proof that all employees expected to wear respirators on this project have medical approval to wear a respirator.

d. Copies of respiratory fit-tests for all workers expected to wear a respirator on this project. Fit testing must be done as required by and in accordance with 8 CCR 1544.

e. Proof of training required by Part 1.5 for type of work employee will do.

1. Proof of Hazard Communication Training for Lead done within the last calendar year for those exposed to lead or who will perform trigger tasks for less than one hour. *Proof may be a certificate or written statement stating training was completed and a list of names of those individuals who were trained. Proof of this training is not needed if employee provides proof of training required by items e. 2, or e 3.*

2. Proof of training in compliance with 8 CCR 1532.1 (l)(2) done within the last calendar year for all employees who will conduct trigger tasks as defined in 8 CCR 1532.1 (d)(2) for more than one hour or who will reasonably be expected to be exposed to lead above the Action Level. *Proof may be a certificate or written statement stating training was completed and a list of names of those individuals who were trained.*

3. Proof of CDPH lead certification for those workers who will conduct trigger tasks as defined in 8 CCR 1532.1 (d)(2) or will reasonably be expected to be exposed to airborne levels of lead above the PEL on projects that will disturb more than 100 square feet of lead-containing material. *Proof of certification will be a currently valid CDPH certification card as a worker or supervisor. Workers who can show proof of*

a valid course completion form and application being submitted to CDPH, will be allowed to work while awaiting full certification from CDPH.

4. Proof of current CDPH certification as a lead supervisor for the on-site competent person for projects involving the conduction of trigger tasks or other activities reasonably expected to exceed the PEL on all projects that will disturb more than 100 square feet of lead-containing material. *Proof of valid certification will be a currently valid CDPH certification card a worker.*

5. If exception to requirement for CDPH certified supervisor listed in Part 1.5.3 is requested, then provide proof of CDPH certified supervisor who will verify containment, personal protection and work practices, and will be able to respond to the project within two hours of request by the Project Monitor.

6. Proof of training meeting the requirements of the US EPA RRP regulations if applicable.

f. Copies of all current SDS for chemicals used on this project.

g. Manufacturers' certifications that high efficiency particulate air (HEPA) vacuums, pressure differential units and other local exhaust ventilation equipment conform to ANSI Z9.2-79 for all HEPA-filtered equipment that will be used on this project. *This is proof that the equipment is actually HEPA filtered. This is separate from the challenge testing requirement needed for equipment used in interior spaces.*

h. Name and contact information of independent testing company who will challenge test all vacuums and air filtration devices used on this project.

I. Statement regarding compliance with all Cal/OSHA exposure monitoring required for this project.

j. Name and contact information for laboratory who will analyze air samples or waste samples and documentation of their certification to conduct such analysis.

k. Name of Waste Transporter who will transport hazardous waste on this project and documentation that the Transporter is allowed to transport lead hazardous waste.

l. Name of Waste Landfill to which lead hazardous waste will be sent and documentation that such landfill is allowed to accept such waste.

m. Should waste water filtration be required on this project, submit manufactures documentation pertaining to the capability of waste water filters to filter particles of, at a minimum, five micrometers in size.

n. List of all rented equipment to be used within a lead regulated area, or a statement that no rental equipment will be used on this project.

1. If rental equipment is to be used, submit written statements from each rental company indicating the rental company's acknowledgment that the equipment is provided for and may be used in areas where airborne levels of asbestos and/or lead may be present.

o. Submit emergency plans. At a minimum submit the following:

1. Submit non-emergency telephone numbers, other then 911, for the appropriate Police, Sheriff, and Fire Departments.

2. Name, pager or cell phone numbers of the on-site supervisor and his immediate company supervisor.

3. Submit detailed written directions from the project site to the medical facility to be used in case of an emergency. Include a map which sufficiently shows the route to be taken from the site to the designated medical facility.

4. Submit written emergency procedures pertinent to the work to be performed and which can be implemented by site personnel if the need arises.

p. Local sanitation district Wastewater Discharge Permit for Surface Washers (if required).

q. Cal OSHA Notification. This is required for this work on all projects that will disturb more than 100 square or 100 linear feet of lead in materials containing greater than 0.5%, 5,000 parts per million (weight by weight), or 1.0 mg/cm^2.

The above listed documents must be provided prior to the start of work that will disturb lead. Under no circumstances will workers or supervisors be allowed to work on this project prior to the receipt, review, and acceptance of this documentation by the Owner and/or Project Monitor. In addition, documentation for rental equipment must be provided before the equipment may be used in a lead regulated area. All delays resulting from the failure of the Contractor and/or subcontractors to provide this information in the required time frame is solely the responsibility of the Contractor and/or subcontractor.

The Contractor must use the Pre-Work Submittal Checklist provided at the end of these specifications to provide the Owner and/or Project Monitor these submittals. Failure to use the form will likely lead to the rejection of the submittal package and a delay in the project that will be the sole responsibility of the Contractor and/or subcontractor.

The Contractor is responsible for maintaining current documents and resubmitting copies to the Owner and/or Project Monitor for any worker whose documents expire during the project. Any worker observed on a job site who either is not approved to conduct work by the Owner and/or Project Monitor or has been approved but documentation pertaining to training, medical evaluation, or respiratory fit testing has expired, will be instructed to stop work until these documents are received by the Owner and/or Project Monitor and the worker is approved to perform work that disturbs lead.

1.6.2 Submittals Provided During The Work Or Following Completion Of The Work If Applicable

Depending on the document, these documents must be provided the Owner and/or Project Monitor on an ongoing basis during the work, or if appropriate following completion of the physical activities associated with the project. The documents must be received and approved by the Owner and/or Project Monitor before the work is considered complete. Failure to provide these documents means the work is not complete, even though the physical activities may be completed.

a. Daily sign-in sheet for each worker entering a lead regulated area.

b. The Contractor must provide the results of exposure sampling done to comply with the requirements of 8 CCR 1532.1 (d) and the requirements of this specification.

c. The Contractor must provide blood sampling and analysis results of lead (BLL) and zinc protoporphyrin (ZPP) levels for all workers who are represented by air monitoring results that exceed the Action Level. Typically, the Project Monitor will require blood lead sampling for all workers on a work shift if one or more air sampling results for that shift is above the Action Level.

   The written results of the blood sampling analysis must be provided the Owner and/or Project Monitor within 21 days of the exposure over the Action Level or within 12 days of the completion of the project, whichever comes first.

d. Copies of job progress reports and project documentation. This must include the names of all employees onsite, the hours worked and a brief description of the work completed at the site(s).

e. The Contractor must provide all waste disposal documentation.

1.7 Third-party Oversight

The Owner is utilizing the services of Entek Consulting Group, Inc. (Entek) as an independent third-party consultant to provide oversight of all work that disturbs lead on this project. The Contractor shall treat this third-party consultant as a designated representative of the Owner. The third-party consultant for this project is known as the Project Monitor. The Project Monitor is expected to perform some or all of the following activities on this project, but may also conduct other activities as needed:

a. Visually monitor the work practices of the Contractor's employees to determine that the work is being done in compliance with these specifications. The Project Monitor may conduct this activity on a continual basis or may make unannounced random visits to the project site to check on the Contractor's performance.

b. Visually inspect for the presence of visible emissions suspected to contain lead.

c. Conduct personal and area air monitoring in accordance with accepted methods.

d. Collect bulk samples of relevant materials to determine the presence or absence of lead.

e. Visually inspect the work area for cleanliness after completion of the work.

1.8 Air Sampling By The Owner and/or Project Monitor

The Owner and/or Project Monitor may determine it appropriate to collect air samples to evaluate the effectiveness of the Contractor's engineering controls and work practices. The Contractor and/or subcontractors shall allow the Project Monitor to attach and collect personal air samples on the workers and shall instruct the workers to comply with the directions for that sampling as given by the Project Monitor.

Air sampling may also be used to verify the effectiveness of the Contractor's containment system. The Project Monitor may choose to collect area air samples within the work area. These samples results may be used to generate an eight-hour, time-weighted average. The result of area samples in a lead work area should normally be far below what the workers are breathing. Therefore should the Project Monitor collect area air

samples within the work area that result in exposures above half the Action Level (1 $\mu g/m^3$), the Project Monitor will require the Contractor and/or subcontractors to re-evaluate their work practices, engineering controls, and containment system.

The Project Monitor may also choose to collect area samples downwind, outside of the regulated work area. These sample results will be compared to background air samples upwind or samples collected prior to the beginning of work. Sample results indicating airborne lead emissions at or above 1 $\mu g/m^3$ above background levels will be interpreted to mean that the Contractor and/or subcontractors containment or engineering controls are inadequate. This may result in the temporary stoppage of work until the Project Monitor is assured that airborne lead levels will significantly diminish by the change in work practices or engineering controls.

1.9 Notification of Employers of Employees in Adjacent Areas

The Contractor and subcontractors who will disturb lead are responsible for ensuring that employers of employees in areas adjacent to the work being conducted have been notified that work disturbing lead will take place.

Typically this notification is in addition to the posting of lead regulated area signs. In summary, this notice shall be provided to all other contractors and subcontractors in areas adjacent to the work. Those employers must be notified in advance of any upcoming work that will disturb or impact lead in a manner that may generate airborne levels of lead that could present a potential exposure to workers at or above the Permissible Exposure Limit (PEL) as defined in 8 CCR 1532.1. This notice shall also provide information on the control measures being implemented and a warning that the employer's employees are to remain outside of the posted regulated areas. The Contractor and/or subcontractors anticipating the need for such notification shall coordinate this notification with the Owner and/or Primary Contractor.

1.10 Suspension Of Work

The Owner and/or Project Monitor may suspend all work that disturbs lead if any controls (such as barriers) fail, if debris known or suspected to contain lead is detected outside the containment, or if work is on the exterior of a structure and wind speeds are more than fifteen miles per hour, or if in the judgement of the Project Monitor, other factors exist that determine the work must be stopped because of the potential for the creation of lead hazards. For example, the Project monitor may conduct perimeter monitoring and discover that lead is being released in concentrations at 5 $\mu g/m^3$ above background levels or work area air monitoring that is above half the Action Level. In either case, the Owner and/or Project Monitor may suspend work until more effective containment, work practices, and engineering controls are utilized.

1.11 Pre-Start Meeting

The Project Monitor typically recommends that there be a pre-start meeting with the Contractor or subcontractor's representative and the Project Monitor approximately five days prior to the expected start of work. The Contractor will be expected to provide the majority of pre-work submittals described in Part 1.6.1 at that meeting. This meeting is designed to answer questions about the project and address issues of concern of either the Contractor, subcontractor, or Project Monitor. Should this meeting be determined not to be necessary, the submittals must be delivered to the Owner and/or Project Monitor no later than five working days in advance of the work.

1.12 Testing For Lead In Paints, Coatings, Ceramic Tile, And Other Materials

The Owner believes lead is common in the paint in the buildings on this project based on age or limited testing. Therefore the Owner does not anticipate paying for additional testing of paint. However, in some cases, it may be in the interest of the contractor and/or subcontractors to determine the exact concentration of lead in the paint or coating since that will affect Cal/OSHA and CDPH compliance issues. For example, many interior surfaces will contain paint which contains less than 600 parts per million lead. Should the paint be tested and that discovered, much of the Cal/OSHA lead standard and all of the CDPH Title 17 standard won't apply.

For example, should the paint contain less than 600 parts per million lead, the contractor and/or subcontractors could drill into or conduct other non-trigger tasks on this material without extensive training. Also, the demolition of these surfaces would not trigger prior notification to Cal/OSHA.

Should the contractor and/or subcontractor wish the paint or ceramic tile to be tested, they will need to request this of the Project Monitor. This testing must be done by the Owner;'s representative. The Project Monitor will be able to assist the contractor and/or subcontractor in determining if testing the material is likely to be worthwhile for the contractor and/or subcontractor.

PART 2.0 MATERIALS AND EQUIPMENT

2.1 Fire Resistant Plastic Sheeting (Poly)

All plastic sheeting used on this project must be fire resistant whether used inside or outside of buildings.

2.2 Challenge Testing Of HEPA Filtration Systems

All HEPA-equipped vacuums and air filtration units to be used on this project in interior spaces during operations that may disturb lead must be challenge tested and meet ANSI requirements using DOP or an equivalent testing agent. Except for HEPA air filtration units used to create negative pressure differentials for the demolition of ceramic tile, this testing must take place within ten calendar days prior to their use and after replacement of any HEPA filter removed from previously tested equipment. Air filtration units used in conjunction with the demolition of ceramic walls must be challenge tested on site. They do not need to be retested as long as they remain on site. They will need to be retested if they are moved off site. Copies of all testing certifications must be provided to the Owner and Project Monitor prior to use of the equipment.

Exception: Subcontractors using HEPA vacuums for incidental cleanup of lead dust resulting from the minimal disturbance of lead as discussed in Part 1.5.1 are exempt from the challenge testing requirement unless, in the judgement of the Project Monitor, there is a reasonable expectation that the subcontractor's HEPA vacuums are leaking.

2.3 Vacuum-Assisted Tools

When using power tools to disturb lead, the Contractor shall only use tools that have a HEPA-filtered-vacuum recovery system.

2.4 Power Washing

No high pressure or water blasting tools may be used if the spray will contact lead-containing paint.

For the purposes of this specification, power washing is defined as: The use of a low pressure "power washer" to rinse and/or wash stable, painted or coated surfaces to remove dust, dirt, grime, and other foreign matter in preparation for re-painting." Under no circumstance may power washing be used to remove lead-containing paints or coatings from surfaces. Before using power washing, all areas of loose, peeling, cracking, or unstable coatings must first be prepared for re-painting using the appropriate methods and personnel protective equipment as specified by Cal/OSHA and CDPH regulations, and these specifications. Typically this means all loose and peeling paint must be removed by hand scraping and sanding or the use of mechanical tools equipped with HEPA filtration.

Should a Contractor or subcontractor use power washing in a manner that releases paint from the surface, and that paint also not be contained, the Contractor or subcontractor will be responsible for all costs associated with the Owner hiring and environmental contractor to clean up the area. The area to be cleaned will be determined by the Project Monitor and will extend past the point of visually apparent debris.

Prior to performing power wash operations the Contractor must determine if the local sanitation district requires a Wastewater Discharge Permit for Surface Washers. Should this permit be required, the Contractor is responsible for obtaining it, accurately completing it and adhering to the permit requirements.

2.5 Personal Protective Equipment

The Contractor shall use NIOSH approved respirators and personal protective equipment as required by 8 CCR 1532.1 and as appropriate based on personal air monitoring results.

Respirator fit test records and the respiratory protection program shall be retained on site as part of the project documentation if respiratory protection is used on this project. Disposable dust/mist respirators shall not be used.

At a minimum, half-face respirators with P-100 (HEPA) cartridges will be required during surface preparation where there is manual scraping or sanding that will take more than one hour to complete. Dry scraping or sanding, mechanical scraping, abrading, sanding, or similar actions will trigger the need for respirators regardless of the duration of the activity.

Regardless of the duration of the work, all workers scraping lead-containing paint or removing or demolishing ceramic tile must wear disposable protective clothing over their wear home clothes. Workers demolishing surfaces that contain ceramic tile must wear full body protective clothing including hoods and gloves.

At a minimum, the Contractor and subcontractors must ensure that no lead dust or debris is tracked out of the contained, regulated area. The Contractor and subcontractors must ensure that all those allowed into the regulated area wear adequate foot coverings that ensure that they will not track contaminated material out of the area when the leave.

2.6 Rental Equipment

Any equipment rented for the purpose of disturbing lead or used within a lead regulated area must be accompanied with documentation verifying that the rental agency has been notified, and acknowledges receipt of notification that the equipment being rented will be used for work inside a lead regulated area. This documentation must be submitted to the Project Monitor prior to the equipment being used on the job site.

PART 3.0 EXECUTION

3.1 Summary

Contractors and subcontractors conducting lead related construction work will be evaluated on a performance standard which includes, but is not limited to, cleanliness of work area, work practices as verified by exposure monitoring, containment set up, and ultimately, the clean up of paint chips, dust, and debris.

Any work practice that creates paint chips, dust, glazed ceramic or painted debris must be conducted within a regulated area as defined in 8 CCR 1532.1 and within a containment at least as stringent as required by Title 17 and/or described in these specifications.

The containment system shall be designed and constructed to prevent visible dust or debris from escaping the work area as well as the escape of airborne lead emissions at or above 10 $\mu g/m^3$ above background levels. Should dust or debris generated by the work be found outside the containment, or the airborne lead outside the containment exceed background levels, the Project Monitor will determine that the containment

is inadequate, in violation of Title 17 requirements, and work will be stopped until the Contractor and/or subcontractors redesign the containment to be more effective.

3.2 Compliance With Requirements For The PEL and Action Level

Contractors and subcontractors strictly adhering to the requirements listed in these specifications who conduct minimal disturbance of lead such as by the conduction of trigger task work amounting to less than one hour, may begin work assuming the Cal/OSHA Permissible Exposure Limit (PEL) will not be exceeded.

Contractors and subcontractors not strictly conforming to suggested work practices must start work assuming the PEL will be exceeded. This means they must comply with all OSHA requirements specified for work that results in exposures over the PEL. This will include, but is not limited to, complying with requirements for training, personal protection, regulated area development, blood testing, personal air monitoring, the development of a written compliance plan, and the notification of employers in adjacent areas.

Contractors and subcontractors must assume the PEL will be exceeded each time they conduct trigger activities that will exceed one hour in duration. This will trigger the need to wear respirators and protective clothing, meet the training requirements specified earlier in these specifications, conduct personal air sampling, develop a written compliance plan and all other actions described as necessary by 8 CCR 1532.1 and these specifications.

3.2.1 Personal Air Sampling

The Contractor and subcontractors are responsible for conducting personal air monitoring during disturbance of lead in compliance with the requirements of 8 CCR 1532.1. At a minimum, Contractors and subcontractors shall conduct representative exposure monitoring on workers on a daily basis whenever those workers will conduct trigger task activities that will take longer than one hour to complete in an eight-hour shift. In addition, air sampling must be done for any work for which the Project Monitor believes has a reasonable potential for generating airborne lead at or above the Action Level. The Project Monitor will not allow work to proceed if the Contractor is not prepared to conduct the necessary air monitoring.

Sample information must include (but is not restricted to) the name of the individuals wearing the samples, the individuals' Social Security Number or Company ID number, the date the samples were collected, identification by unique method of the area where the work is being performed, and identification of the work being performed. EXAMPLE: James Black, 000-11-222, 06/25/03, Bill Jackson Elementary Owner, Building H, Classroom 5, East covered walkway, paint surface preparation work.

Laboratory results shall be provided to the Owner and/or Project Monitor within 72 hours of sample collection. Electronic copies must be received within 14 days of the Contractor receiving the results from the laboratory. Contractor and/or subcontractor must submit proof that laboratory has the required licenses to analyze air samples for lead.

Should they wish to make use of the exceptions to air sampling stated in 8 CCR 1532.1 (d)(3)© & (D), the Contractor and/or subcontractors must submit the required information to the Owner and/or Project Monitor and receive written approval from the Owner and/or Project Monitor prior to reducing the personal protection, containment, or engineering controls stated in this specification. In general, air sampling results that are intended for use to reduce personal protection requirements must be collected on this project. Air sampling results from other projects will not be allowed to create a negative exposure assessment for use on this project.

3.3 Work Involving Whole Component Removal Or Demolition Of Entire Structure

Intact lead-containing paint on construction debris is generally not considered a hazardous waste in California. However, loose and peeling paint on structures may result in all construction debris from that site being considered a hazardous waste.

Therefore prior to the demolition or removal of painted material and the disposal of that material, all loose, peeling or flaking paint must be removed. This includes objects such as fences, built-in furniture or cabinets, other similar structures, as well as entire structures being demolished.

Any paint debris generated during this work must be separated into appropriate waste streams and handled as a hazardous waste, or as deemed appropriate as discussed in Part 3.11 Lead Waste Management.

3.4 Prohibited Work Practices

The following work activities are prohibited on the project:

a. Open-flame burning or torching.

b Machine sanding or grinding of lead materials or surfaces coated with lead unless the machine is equipped with a HEPA-filtered-vacuum recovery system.

c. Un-contained hydro-blasting or high-pressure washing.

d. The use of power washing to remove loose and peeling paint.

e. Abrasive blasting or sandblasting without a HEPA-filtered-vacuum recovery system or done outside of a negative pressure enclosure.

f. Heat guns operating above 1,100 °F.

g. Dry scraping, except for limited areas where electrical hazards create a higher risk than lead or unless specifically approved by the Project Monitor.

h. Use of methylene chloride based paint strippers.

3.5 Competent Person

The Contractor and/or subcontractors disturbing lead shall have a competent person (as defined by Cal/OSHA for construction activities) onsite at all times to supervise and oversee all activities which may disturb materials containing lead.

The above requirement is not required for environmental contractors conducting work limited to the removal of loose and peeling paint on structures scheduled for demolition. In those situations, the on-site supervisor must meet the lead training requirements as stated in Part 1.5.2 Required Training For Those Exposed Over the Action Level Or Who Conduct Trigger Tasks. In addition, the Contractor must have a CDPH certified supervisor approve the containment setup at the start of each shift that will disturb lead, approve the work practices and personal protective equipment worn by the workers, verify that proper air monitoring is being collected, be able to return to the site within two hours if requested by the Project Monitor, and approve the final cleanup of the work area prior to a visual inspection of the work area being conducted by the Project Monitor. *The certified supervisor will always be required to approve the initial set up of the containment,*

personal protection, and work practices at the start of the job, but then depending on the quality of the work demonstrated, the Project Monitor may not require the certified supervisor to inspect the work site at the start of each shift. This exemption will be revoked should air sampling on this project demonstrate airborne lead exposures to workers or supervisors are above the Action Level.

3.6 Work Site Preparation & Containment Requirements

The Contractor and/or subcontractor is required to contain the disturbance of lead in a manner that prevents lead-contaminated dust, debris, water, or air from leaving the regulated work area in an uncontrolled fashion. The containment must be developed in compliance with the requirements of Title 17 and these specifications. The presence of lead dust, debris, or air above background levels will indicate that the containment is inadequate. Work will be stopped and the Contractor and/or subcontractor must adjust work practices, engineering controls, or the containment in a manner that convinces the Project Monitor that the material will no longer be able to escape the regulated work area.

3.6.1 Exterior Work Site Preparation & Containment

The Contractor and subcontractors are responsible for ensuring that building occupants and those in adjacent areas are not exposed to lead dust or debris as they enter or exit buildings. The Contractor and subcontractors shall ensure that building occupants and others in the adjacent area do not enter the lead regulated area and have a safe means of access and egress to the building. Close all doors and windows within 20 feet of the renovation. On multi-story buildings, close all doors and windows within 20 feet of the renovation on the same floor as the renovation, and close all doors and windows on all floors below that are the same horizontal distance from the renovation.

Ensure that doors within the work area that will be used while the job is being performed are covered with plastic sheeting or other impermeable material in a manner that allows workers to pass through while confining dust and debris to the work area.

Cover the ground with plastic sheeting or other disposable impermeable material extending 10 feet beyond the perimeter of surfaces undergoing renovation or a sufficient distance to collect falling paint debris, whichever is greater, unless the property line prevents 10 feet of such ground covering. Ground containment measures may stop at the edge of the vertical barrier when using a vertical containment system.

The poly must be secured to the side of the building or structure with tape, or other anchoring system, so that there is no gap between the poly and the building or structure. The poly installed to cover ground or landscaping shall be installed in a manner to ensure that it will not blow away or billow from the wind. The use of weights such as wood is acceptable as long as the poly does not billow or blow in a manner that releases lead dust or debris off of it.

If the renovation will affect surfaces within 10 feet of the property line, the renovation firm must erect vertical containment or equivalent extra precautions in containing the work area to ensure that dust and debris from the renovation does not contaminate adjacent buildings or migrate to adjacent properties. Vertical containment or equivalent extra precautions in containing the work area may also be necessary in other situations in order to prevent contamination of other buildings, other areas of the property, or adjacent buildings or properties.

The exterior of all windows located within ten feet of any disturbance of lead must be sealed by covering them with at least one layer of six-mil thick poly sheeting. All ventilation machinery within 20

feet of the disturbance should be sealed by at least one layer of six-mil thick poly sheeting. Keep all windows within 20 feet of working surfaces closed, including windows of adjacent structures.

Should the disturbance of paint involve removing paint from the exterior of a window, then the Contractor or subcontractor must seal the inside of the window with two layers of six-mil thick poly. The Project Monitor will typically waive the requirement to seal the inside of the window with two layers of poly if the disturbance of lead involves less than 5% of the painted surface area of an exterior window.

Those in adjacent areas must be kept a sufficient distance from any chance of encountering lead dust and debris. Therefore the Contractor shall erect barrier tape at a distance sufficient enough from the poly barriers to ensure that those passing by the area are not directly adjacent to the poly containment barriers. In general, the barrier tape should be at least five feet from the edge of the poly placed on ground surfaces if those surfaces are accessible to unauthorized persons. The area off the poly sheeting, but inside of the barrier tape, is still part of the regulated area however and is not allowed to have any lead dust or debris present at any time.

The Contractor and/or subcontractor must post the regulated area sign as described in 8 CCR 1532.1 (m) (WARNING, LEAD WORK AREA, POISON, NO SMOKING OR EATING.) The posting may be done by wording on the barrier tape or by suspending OSHA-approved signs with the wording on the tape barriers or on readily apparent surfaces visible to persons outside the area.

All those entering the regulated area must sign in on a roster that documents their presence in the area. This roster must be provided the Owner and/or Project Monitor on a daily or weekly basis as determined by the Project Monitor.

Work disturbing lead shall not be conducted on exterior surfaces if wind speeds are greater than 15 miles per hour or, in the judgement of the Project Monitor, pose a risk of blowing lead dust or debris out of the regulated area.

In addition, for work done on ladders or man lifts, the Project Monitor is likely to require the workers to scrape loose and peeling paint directly into a container, rather than let the loose debris float down and possibly off the containment barrier. Typically the Project Monitor will allow the workers to scrape loose and peeling paint into a cardboard box held in one hand while scraping with the other hand.

Work must stop and cleanup occur before rain begins.

The Contractor shall not leave debris or poly sheeting out overnight if work is not completed. The Contractor shall keep all debris in a secured area until final disposal.

3.6.2 Interior Site Preparation & Containment

For interior work site preparation, one layer of six-mil poly sheeting must be placed on the entire floor. However, the entire floor area need not be covered by poly for large interior areas where the disturbance of lead is limited to the perimeter of the area. If the entire floor area is not covered with poly, the poly must extend out a minimum of ten feet from those areas where lead will be disturbed. The poly sheeting must be secured to the wall using tape so there is no gap between the floor and the wall. The poly must also be secured to the floor.

If individual rooms are being worked in, seal all doorways with a primitive airlock flap to prevent contamination of other areas of the building. Post the regulated area signs, as required by 8 CCR 1532.1 (m), at the entrance to the regulated area and all other entry points to the area.

All those entering the regulated area must sign in on a roster that documents their presence in the area. This roster must be provided the Owner and/or Project Monitor on a daily or weekly basis as determined by the Project Monitor.

If feasible, turn off all HVAC systems in the regulated work area. In addition, seal all ventilation systems in the regulated work area with a minimum of one layer of six-mil poly. Any exceptions to this requirement must be approved by the Project Monitor. Typically, the Project Monitor will require all ventilation system ducts and/or registers to be sealed with poly if they are within 20 feet of the disturbance of lead even if they are turned off. Seal all furniture or other equipment that must remain in place with a layer of four or six-mil poly. A minimum of six-mil poly is required for all work disturbing ceramic tile.

Small amounts of ceramic tile, such as covering less than two square feet, may be removed using this type of interior containment if the tiles are removed using hand tools and remain substantially intact during the removal process. Additional requirements for interior site preparation are required when surfaces covered by lead-containing ceramic tile are demolished. Those requirements are discussed in Part 3.6.3.

3.6.3 Additional Containment Requirements For Demolition Of Ceramic Tile And/Or Mechanical Disturbance Or Blasting Of Lead-Containing Materials Without A HEPA-Filtered-Vacuum Recovery System

This part primarily addresses work that will involve the demolition of building surfaces covered by lead-containing ceramic tile. These requirements shall also apply shall the Contractor and/or subcontractors disturb lead-containing material, in an interior space, using mechanical or blasting methods without a HEPA-filtered recovery system approved by the Project Monitor.

In addition to the requirements stated in Part 3.6.2, the demolition of ceramic tile that involves the breakage or cutting of the tile must be done inside a negative air pressure containment system. The negative air pressure must be generated using an air filtration unit that has been challenge tested on site as described in Part 2.2 Challenge Testing Of HEPA Filtration Systems.

Seal all critical barriers between the work area and the adjacent areas with a minimum of six-mil thick poly. Critical barriers are any openings in the surface areas of the regulated work area through which air, dust, or water might pass. This includes, but is not necessarily limited to all windows, doors, HVAC vents and units.

All objects or equipment that cannot be removed from the area must be covered and tape sealed with a minimum of six-mil thick poly. Any exceptions to this requirement must be specifically approved by the Project Monitor.

Typical decontamination requirements for paint scraping and most manual demolition are discussed in Part 3.6.4 Decontamination Procedures. However, the decontamination procedures surrounding the demolition of ceramic tile are much more stringent and are described below.

All regulated work areas where ceramic tile will be broken, or other tasks that will, in the opinion of the Project Monitor, generate significant amounts of lead dust, must include a personal

decontamination area and the supervisor must ensure that, at a minimum, the following procedures are followed.

a. Work That Disturbs Less Than 100 Square Feet Of Lead-Containing Material

Work involving the demolition of less than 100 square feet of lead-containing material, including ceramic tile, is not expected to result in airborne exposures over the PEL. Therefore the personal decontamination system may, at a minimum, be a one stage decontamination system that separates the work area from the adjacent areas.

1. This must, at a minimum, include an airlock chamber between the work area and the adjacent areas. Each side of the air lock must be covered by poly curtains. At no time, including during the removal of waste containers, may the poly doors be open on both sides of this chamber at the same time. This chamber must be a minimum of three feet by three feet by six feet tall. There must be a clean poly drop cloth measuring at least five feet by five feet immediately outside this air lock onto which workers will step after exiting the air lock. This poly drop cloth must be kept visually clean of dust and debris at all times. This poly drop cloth shall be removed at the end of the work shift and replaced with a new clean poly drop cloth at the start of the next shift.

2. The workers must be able to remove their protective clothing and wash off their respirator before leaving the work area. The supervisor must ensure that they do not track lead containing materials out of the work area on their feet. Footwear worn out of the work area must have been covered by protective booties if worn in the work area. Following removal of the protective covering over the footwear, all footwear worn in the work are must be HEPA vacuumed before allowing it to be worn out of the regulated area. Footwear that can be washed before leaving the work area does not need to be covered by protective booties as long as the exterior of the footwear is thoroughly washed prior to being worn outside of the regulated area.

3. After they leave the decontamination chamber, workers must go directly to a nearby location where they must throughly wash their hands and face. Cal/OSHA specifically states that the supervisor must ensure this washing takes place.

4. Special attention must be given that workers do not track lead dust out of the work area on the soles of their feet or shoes.

5. Following the exit of workers from the work area, whether leaving for breaks or at the end of the day, the supervisor must visually inspect the area outside the decontamination system to verify that no dust or debris is being tracked out.

6. The Contractor shall not permit the storage or consumption of food and/or beverages inside the containment or within any of the decontamination chambers. Food or drink consumption within containment may result in the worker(s) dismissal from the site for the duration of the project.

7. Work will be stopped if the Project Monitor determines that the decontamination system is not kept in acceptable condition or used properly.

b. Work That Disturbs More Than 100 Square Feet Of Lead-Containing Material

For all work that disturbs more than 100 square feet of wall ceramic tile, the decontamination system must be a full, three-stage decontamination chamber with a shower as described below.

1. The three-stage decontamination unit with shower must be contiguous with the containment unless determined infeasible by the Project Monitor.

2. The worker decontamination enclosure system shall consist of at least a clean room, a shower room, and an equipment room, separated from the work area by airlock chambers. The airlock chambers shall be at least three feet square in size. All fabricated units shall have, at a minimum, two layers of six-mil poly sheeting.

3. Entry and exit from all airlock chambers and the decontamination enclosure system chambers shall be through doorways designed to restrict air movement between chambers when not in use. The dirty side shall have an extra layer of six-mil poly sheeting on the floor as a an extra drop cloth and it shall be replaced at least daily.

4. The clean room shall be sized and equipped to adequately accommodate the work crew. Lighting, heat and electricity shall be provided as necessary for comfort. This area must remain clean. If in the judgement of the Project Monitor, equipment storage or other activities taking place in this area affect the cleanliness of the area, the Contractor may be required to move that storage and those activities away from the designated clean area.

5. The shower room shall contain one or more showers as necessary to adequately accommodate workers and shall meet OSHA requirements for temporary shower facilities. The shower enclosure shall be constructed to ensure against leakage of any kind. In addition, the shower shall be a separate unit from the decontamination unit walls. The shower unit cannot be made from poly. Metal or hard plastic is acceptable. An adequate supply of soap, shampoo and towels shall be supplied by the Contractor and available at all times.

6. Shower water shall be drained, collected and filtered through a system with at least a five micrometer particle size collection capability. Filtered waste water shall be disposed of into a sanitary sewage system. Under no circumstances may it be released where it might enter a storm drain.

7. The shower chamber shall be, at a minimum, three feet by three feet wide by a minimum of six feet in height. The shower chamber shall be constructed so that no water from the shower can spray out of the chamber, nor any water run down the sides of the poly and escape the chamber system. The Contractor must have a back-up containment system to control leaks from the shower, connections and hoses. This can be either a secondary metal pan under the shower or a series of poly barriers, separate from the construction of the chamber, that are solely for the purpose of collecting water that might leak out of the shower system.

8. Each decontamination chamber shall have, at least, a four inch lip of poly from the floor up the wall to prevent possible transfer of water and debris between chambers. Excess poly at the corners of this floor is to be fitted to the sides of the chamber by folding poly and taping, as opposed to cutting away excess poly and taping seams. For some projects, particularly those where the decontamination chambers are

located on surfaces needing special protection from water, the Project Monitor may determine additional precautions are necessary such as requiring the shower chamber to have an overflow pan, in which the shower unit sits, that is capable of holding two inches of water. The filter system and any hose connections transferring contaminated water shall be located in a secondary containment, such as a metal pan. Any leakage shall be double-bagged or re-filtered. Should this requirement for an additional metal pan under the shower be required, it will be identified elsewhere in these specifications and discussed at the bid walk.

9. Unless otherwise specified in these specifications, the minimum size of the decontamination chambers shall be the following:

Clean Change Room	five feet x six feet x six feet high
Shower	three feet x three feet x six feet high
Dirty Change Room	five feet x six feet x six feet high
Air Lock Chambers	three feet x three feet x six feet high

10. The Dirty Change Room may be part of the work area as long as a separate drop cloth is placed down before the entrance to the first airlock chamber and this drop cloth dust not contain significant quantities of debris from the work area.

11. There must be a clean poly drop cloth measuring at least five feet by five feet immediately outside the clean side airlock onto which workers will step after exiting the airlock. This poly drop cloth must be kept visually clean of dust and debris at all times. This poly drop cloth shall be removed at the end of the work shift and replaced with a new clean poly drop cloth at the start of the next shift.

12. Special attention must be given that workers do not track lead dust out of the work area on the soles of their feet or shoes. Footwear worn out of the work area must have been covered by protective booties if worn in the work area. Following removal of the protective covering over the footwear, all footwear worn in the work are must be HEPA vacuumed before allowing it to be worn out of the regulated area. Footwear that can be washed before leaving the work area does not need to be covered by protective booties as long as the exterior of the footwear is thoroughly washed prior to being worn outside of the regulated area.

13. Following the exit of workers from the work area, whether leaving for breaks or at the end of the day, the supervisor must visually inspect the area outside the decontamination system to verify that no dust or debris is being tracked out.

14. The Contractor shall not permit the storage or consumption of food and/or beverages inside the containment or within any of the decontamination chambers. Food or drink consumption within containment may result in the worker(s) dismissal from the site for the duration of the project.

15. Work will be stopped if the Project Monitor determines that the decontamination system is not kept in acceptable condition or used properly.

3.6.4 Decontamination Procedures

Decontamination procedures shall be established by the Contractor and subcontractor depending upon the airborne concentrations of lead as well as the amount of dust and debris created by the work. At a minimum, the decontamination procedures shall be in compliance with 8 CCR 1532.1 (I)(1-5). As stated in 8 1532.1 (I)(1-5), the Contractor shall assure that these decontamination facilities are used by the supervisor and workers.

For work that does not exceed the PEL, and/or does not include the disturbance of more than 100 square feet of material, the Contractor and/or subcontractor must assure that a hand-washing station is available and used by the supervisor and workers. For work that exceeds the PEL, or involves the breakage of ceramic tile in amounts over 100 square feet, the Contractor must ensure that workers shower, at a minimum at the end of the work shift as required by 8 CCR 1532.1.

3.6.5 Avoiding Contamination Of Adjacent Areas By Proper Decontamination

Should the Owner and/or Project Monitor discover that an occupant of the regulated area left the regulated area without properly decontaminating, the Contractor will be required to clean the adjacent areas that in the opinion of Project Monitor may have been exposed to lead dust or debris from this action. Failure to properly decontaminate is demonstrated by wearing protective clothing outside the regulated area that was previously worn in the area or by wearing footwear outside the regulated area that was not properly covered and/or decontaminated. The failure to adequately decontaminate will trigger the following cleaning. In all areas determined necessary by Project Monitor, the Contractor will be required to HEPA vacuum, then wet wash, then HEPA vacuum again all potentially contaminated areas and items to the satisfaction of the Project Monitor. The Project Monitor will not need to demonstrate the need for this cleaning by the presence of visible dust and will not need to collect settled dust samples in order to require the Contractor to implement the cleaning routine.

3.6.6 Approval Prior To Start Of Work

The Project Monitor shall visually inspect any regulated area for compliance with this specification before the contractor and/or subcontractor may begin work that may disturb lead. The contractor and/or subcontractors may not begin work disturbing lead without approval from the Project Monitor. The contractor and/or subcontractor must contact the Project Monitor sufficiently in advance of needing the visual inspection and coordinate with the Project Monitor in order to minimize any delays resulting from the need for this visual inspection.

Typically, once the Project Monitor has reviewed the contractor and/or subcontractors regulated work area set up, the work site supervisor will be told that they may start work at future regulated work areas without prior authorization from the Project Monitor as long as they assure the Project Monitor that the containment and work practices will be implemented as approved by the Project Monitor.

3.7 Wet Work Practices

Unless determined infeasible by the Project Monitor, all disturbance of lead-containing materials must utilize wet methods for dust suppression.

3.8 Prompt Cleanup Of Debris

Removed lead-containing material shall be kept wet and promptly placed in the type of waste containers required by this specification. The Contractor and subcontractors are encouraged to place debris in containers shortly after it has been removed. However, at a minimum, all bulk debris must be containerized before any work stoppages such as for breaks, lunch, or the end of a shift. Bulk debris must be kept adequately wet until

it is containerized. The Contractor must plan only to disturb amounts of material that can be cleaned up and containerized before the next work stoppage. Delays and additional costs incurred by the Contractor for failing to adequately calculate the amount of time needed to clean up debris will be the sole responsibility of the Contractor. For example, if a crew must work overtime to containerize debris before ending the shift, those additional costs are the sole responsibility of the Contractor.

The Contractor and/or subcontractor must not allow excessive amounts of dust and debris to gather on the floor containment barriers. If in the opinion of the Project Monitor, too much debris is being allowed to gather on the floor poly, the Project Monitor will require the Contractor or subcontractor to either assign a worker to conduct continual cleanup, or the workers scraping paint or conducting other work disturbing lead will have to contain the debris before it falls to the ground. Typically this is done by scraping paint directly into a cardboard box held by the worker as he or she scrapes off the loose and peeling paint.

3.9 Final Cleanup Of The Work Area

3.9.1 Exterior Work Areas

The Contractor and/or subcontractor must HEPA vacuum up all visible dust and debris off containment barriers. Then gently roll and/or fold poly barriers in on themselves in order to avoid releasing any remaining dust to adjacent areas during this process.

The final step will be to vacuum up any visible dust or debris in the work area or regulated area that is suspected to contain lead. The area must be visually clean of all lead-related dust and debris, and all poly barriers must be removed before the workers leave the job site. The regulated area barrier tape and/or signs must be taken down. Critical barriers erected on windows and HVAC systems may be left in place if work will take place in those same areas during the next work shift. Otherwise those barriers must also be removed before the workers leave at the end of the shift.

3.9.2 Cleanup Of Interior Work Areas

All cleanup of the interior work area shall be performed using a HEPA vacuum and wet washing techniques. All surface areas in the work area that reasonably could have been exposed to airborne lead must be HEPA vacuumed and/or wet washed. This includes wall surfaces when the work included ceramic tile demolition. Ceilings must also be cleaned if the ceilings are less than five feet above the area where ceramic tiles were disturbed. For example, if the ceramic tile wainscoting extended six feet up the wall, and the ceiling is at eleven feet or lower, the ceiling will need to be vacuumed. If, however, the ceiling is above eleven feet, it will not need to be cleaned. This is based on the assumption that lead dust is unlikely to migrate up more than five feet. If in the judgement of the supervisor or Project Monitor the ceiling may be contaminated, the ceiling shall be cleaned regardless of how far it is above the disturbance of the tile.

3.10 Final Inspection Of The Work Area

The Project Monitor will inspect work areas for visual signs of dust and debris related to the disturbance of lead. The Project Monitor will not inspect or evaluate the quality of paint preparation work such as paint scraping. The contractor who will be painting the prepared surfaces is responsible for the quality and workmanship of the surface preparation. However, if the work involves the removal of loose and peeling paint prior to the demolition of a structure, the Project Monitor will evaluate the completeness of that work.

For exterior work, the Project Monitor will visually inspect the work area to determine that there is no visible dust or debris still in the area that is reasonably expected to have been generated by the work. All poly barriers (except for on critical barriers in areas needed for the next shift) and barrier tape and signs must be removed.

Until told otherwise by the Project Monitor, the supervisor must notify the Project Monitor in advance of the end of the shift in order for the Project Monitor to visually inspect the work area prior to the workers leaving for the day. Typically this will not be required after the workers demonstrate that they consistently properly clean the work area before leaving.

For interior work, the Project Monitor will conduct a thorough visual inspection for dust and debris that may be related to the disturbance of lead. All surface areas must be clean. Residue dust will be assumed to contain lead and must be cleaned.

Until told otherwise by the Project Monitor, the supervisor shall notify the Project Monitor when the supervisor believes the work is complete and ready for a visual inspection. Prior to calling the Project Monitor for the visual inspection, the supervisor must personally inspect the area and determine that it is clean and ready for a final inspection.

The Project Monitor typically will not collect dust wipe samples to verify the cleanliness of an area unless specifically stated otherwise elsewhere in these specifications. However, dust wipes may be collected in either of the following circumstances. In both cases the supervisor will be told of the possibility of the collection of dust wipes and encouraged to conduct extra cleaning of the areas.

a. Ceramic Tile Removal Closely Adjacent To Kindergarten Classrooms, Daycare Facilities, or Food Preparation Areas Including Kitchens and Eating Areas.

   The Project Monitor is likely to conduct dust wipe sampling on the floor in the area between the decontamination unit and occupied areas of the property where children under the age of six routinely may be present. The supervisor will be told in advance that this testing will take place and is encouraged to clean the area between the decontamination area and where the sample will be collected. This sample will be collected within 20 feet of the decontamination chambers unless the Project Monitor believes that poor work practices or decontamination procedures have contaminated the area as discussed below.

b. Failure To Comply With Work Practices, Engineering Controls, Or Decontamination Procedures

   If in the judgement of the Project Monitor, the Contractor and/or subcontractor has not followed the requirements of this specification regarding work practices, engineering controls, and decontamination procedures, the Project Monitor will collect dust wipe samples in areas believed contaminated by the Contractor or subcontractors' actions. The supervisor of the project will be told in advance if such testing will be conducted and given time to clean those areas. For example, Part 3.6.5. describes actions that will lead to additional cleaning by the Contractor.

   Should dust wipe sampling be necessary, the Project Monitor will conduct such testing with the specified intent of verifying whether the containment process and decontamination processes used by the Contractor and/or subcontractor were adequate in preventing the release of lead dust from the work area. The samples will be collected according to the procedures required in Title 17. The containment will be judged appropriate if the results of the samples do not indicate a dust lead hazard for floors as specified in Title 17.

3.11 Power Washing of Exterior Building Surfaces

For the purposes of this procedure power washing is defined as the use of a low pressure "power washer" to rinse and/or wash stable, painted or coated surfaces to remove dust, dirt, grime, and other foreign matter in preparation for re-painting. In no circumstance is this to be construed as water blasting, and is not intended nor shall be used to remove lead-containing paints or coatings from surfaces. Loose and peeling paint must be removed by the other methods described in this specification before power washing may be conducted. Should power washing begin to release paint from the substrate, the Contractor must stop the power washing process and remove the loose material following the procedures described in these specifications.

3.11.1 Waste Water Discharge Permits

Many local sanitation districts require the completion and submission of a waste discharge permit prior to allowing the use of power washers. Therefore, prior to performing power- wash operations, the Contractor must obtain a Wastewater Discharge Permit for Surface Washers, if required, from the local Sanitation District, Water Quality Division; Industrial Waste Section, and adhere to the permit requirements. It is the Contractor's responsibility to obtain and properly fill out a current copy of this permit if it is required.

3.11.2 Required Work Practices For Power Washing

Where power washing of exterior surfaces of buildings coated with lead-containing paint(s) or seal coats is specified, or in those areas where the Contractor opts to use power washing to prepare surfaces, all of the following conditions must be met prior to uncontrolled washing without waste water control/collection measures. The following test is conducted prior to allowing the beginning of full power washing in order to verify that measurable amounts of lead are not being released by the washing process. Once it is determined that the washing process does not release lead, the Contractor will be allowed to proceed with power washing with only minimal additional requirements.

a. The Contractor in coordination with the Project Monitor shall select a minimum of one test area typical of the surfaces to be power washed. This area shall be100 or more square feet in area. On some sites where the building surfaces are different, the Project Monitor may require more than one area to be tested.

b. The Contractor shall construct a floor containment for the test areas. The containment must be designed to capture and collect all wash water and any paint chips generated during the assessment. Typically the Contractor simply needs to use poly on the ground to create a basin like effect which will capture the spray water.

c. The Project Monitor will first collect a sample of source water such as from the hose tap. The Contractor will then be asked to power wash the test area in a similar manner as to how the building as a whole will be power washed. Work shall be halted if the washing process causes delamination of paint from the test area surfaces. Modifications to the methods and work practices shall be made prior to resumption of power washing and these modifications must be approved by the Project Monitor prior to their implementation.

d. The Project Monitor will collect one or more samples of the water runoff that was captured by the Contractor following power washing the test area. As long as there are no visible paint chips in the water and/or the amount of water is not excessive, the Contractor may release the captured water as long as it is absorbed by landscaping or will evaporate. No waste water

resulting from power washing operations may be allowed to drain into any storm drain as required by the State of California.

e. The Project Monitor will send these samples to a laboratory for lead in water analysis. The sample results for the source water will be compared to the water runoff sample. If similar amounts of lead are present in each, the power washing process is unlikely to release lead into the water or surrounding area. The power washing process should not release lead as long as loose and peeling paint was removed prior to the start of power washing.

f. The Owner will pay for the collection of these water samples and their laboratory analysis.

g. The Project Monitor will notify the Contractor as soon as the results of the testing process are known. The Project Monitor and the Contractor will need to discuss alternatives to power washing in the unlikely situation that the water test shows lead contamination in the runoff water.

h. The Contractor shall assume that the testing and water analysis process will take a total of three work days. For example, if the test is done on the morning of the first day, the water samples will arrive at the laboratory on the morning of the second day. The results of the sampling process will be available on the afternoon of the third day. Since no power washing will be allowed until this testing process shows acceptable results, the Contractor must build this testing process into the work schedule. The Contractor may choose to accelerate the testing process but this will mean that the Contractor, rather than the Owner, will pay for the transportation of the samples to the laboratory and for the rush laboratory analysis. Even under “rush” conditions, it is very unlikely that the entire process could be completed in one day. The Contractor may want to schedule the testing process prior to the completion of other paint preparation work in order to have the results by the time the paint preparation work is complete.

I. Upon receiving approval to begin power washing, the Contractor will be allowed to proceed power washing the building. The Contractor must, however, notify the Project Monitor 24 hours in advance of the beginning of power washing in order for the Project Monitor to monitor the process should he or she feel that is appropriate.

j. Employee protective measures such as disposable clothing and respirators will not be required as power washing is not likely to result in airborne exposures of lead above the Action Level.

k. Waste water produced from power washing operations which does not contain chips of paint may be allowed to soak into the ground below the area being washed. If the area located below or around the surface to be washed does not allow for absorption into the ground, the water must be directed toward an area on the property that will allow for absorption into the ground or evaporation. The Contractor must take steps to ensure that no waste water enters storm drains regardless of the lead content of the water.

3.12 Lead Waste Management

Proper testing and disposal of all waste material is the responsibility of the Contractor.

The Contractor must plan the work in order to minimize the generation of hazardous waste during the disturbance of lead-containing materials. The Contractor must create separate waste streams as necessary

to include separation of any loose paint chips or flakes debris from other construction debris. All waste streams must be identified by the Contractor before the work begins and separated during the course of the project to minimize costs of disposal.

The Contractor is responsible for all costs associated with the testing, removal, packing, loading, shipping, and disposal of lead containing waste generated during this project. This does not include waste water testing done to determine if power washing is permitted which will be covered by the Owner.

The Contractor is required to comply with all regulations in Title 8 Section 1532.1 Lead in Construction and Cal/EPA Title 22 for waste classification and disposal.

3.12.1 Lead Waste Testing

The Contractor must conduct appropriate waste stream characterization testing and/or filtering prior to disposal of waste products such as water, sand, paint chips, vacuum debris, and filters generated during surface preparation activities. Once completed, the test analysis results must be submitted to the Owner and/or Project Monitor for review. The Contractor is responsible for all costs associated with waste stream testing. Contractors may choose to avoid some waste testing by presuming that the waste is a lead hazardous waste. Waste must be tested if the Contractor wishes to treat it as a non-hazardous waste.

The Contractor may not remove or dispose of the identified materials from the job site until this review has been completed and the Contractor has been informed by the Owner and/or Project Monitor of their concurrence that the materials have been properly tested and meet the requirements allowing the materials to be classified as non-hazardous.

3.12.2 Uniform Hazardous Waste Manifests

For all hazardous waste that requires an EPA manifest, the Contractor must coordinate with the Owner for signature of the manifest. In general, the Contractor must notify the Owner a minimum of 24 hours in advance of the need for a signature. Hazardous waste cannot be transported without an authorized signature so it is the responsibility of the Contractor to coordinate with the Owner the time waste transporters will need the signature. Delays resulting from the failure of the Contractor to obtain an authorized signature from the Owner will be the sole responsibility of the Contractor, unless the Owner was provided 24 hour in advance notice and the transporter arrived on time during the regular work hours of the Owner.

3.12.3 Waste Containers

All debris generated in the regulated work area shall be placed in DOT approved containers. The containers shall be leak tight and meet the requirements as stated in these specifications.

If in the judgement of the Project Monitor, the Contractor's method of containerizing debris is inadequate and either results in the release of dust or debris or is reasonably expected to result in such a release, the Contractor will be forbidden to continue waste containerization or load out until the containers meet the approval of the Project Monitor. This may result in the Contractor being required to change from one type of container to another. It must be understood that the Contractor is responsible for proper containerization of waste and therefore, will be required to provide for adequate and appropriate containers regardless of cost incurred due to failure of one system of containerization being required over another.

If utilizing bags to contain lead hazardous waste, two bags at least six-mil in thickness must be used. The inner bag may be sealed with adequate amounts of tape necessary to secure the opening of the bag. Only the second or final bag must be gooseneck sealed.

Regardless of the wastes characterization or designation as construction debris or hazardous waste, all waste containers shall be stored in designated and secure areas separate from the work area prior to testing and/or disposal.

The Contractor is responsible for proper storage and labeling of all hazardous waste containers while they are being used as storage and before they leave the job site according to the requirements of DTSC and DOT.

Building components such as wood with loose and flaking paint must, at a minimum, be wrapped in one layer of six-mil poly and adequately sealed with tape to secure the containerized material.

Concentrated lead waste such as sludge from paint stripping operations, lead containing paint chips and/or dust, HEPA vacuum contents and filters must be assumed to be hazardous waste until properly tested and must, at a minimum, be placed in poly lined, DOT approved drums.

Hard edged materials such as floor tile, gypsum board, plaster, stucco, ceramic tile, and other materials that may tear bags must be assumed to be hazardous waste until properly tested and must, at a minimum, be placed in poly lined, ridged-walled containers such as fiber drums or cardboard boxes as the final container.

Sharp edged components with peeling, blistering or flaking paint (e.g., nails, screws, metal lath, tin sheeting, door frames, etc.) must, at a minimum, be wrapped in one layer of six-mil poly sheeting, or a single six-mil thick bag and adequately sealed with tape to secure the containerized material.

3.13 Alternative Work Plans

The Contractor and/or subcontractors may submit alternate work plans to the suggested work practices and containment strategies as stated in these specifications. These alternate work plans or containment strategies must be approved by Owner and/or Project Monitor prior to their implementation.

PART 4.0 DOCUMENTATION SUBMITTAL REQUIREMENTS

Pre-Start Submittal Form

This form must be completed, signed, and submitted with the Contractor and/or subcontractors' documents required prior to the start of work. This form and these documents must be submitted to the Owner and/or Project Monitor in the time specified in the project documents prior to the start of work disturbing lead.

Please attach submittals in the order listed below. Please check off each item that is submitted. Write NA in spaces for which you believe the requirement is Not Applicable.

All Contractors and subcontractors who will have employees disturb lead on this project must, at a minimum provide proof of item number 1.6.1.e.1., lead hazard communication training in compliance with 8 CCR 1532.1 (L)(A)(1). This is the only submittal that must be provided by these employers as long as they do not disturb more lead than is described in Part 1.5.1.

The following submittals must be provided by all Contractors and subcontractors who will, at a minimum, have employees who will conduct trigger tasks for more than one hour per shift, will potentially be exposed above the Action Level, or will conduct other activities as determined by the Project Monitor that may result in significant exposure to lead.

a. ____ A written lead compliance plan in compliance with 8 CCR 1532.1 must be provided that includes the following:

1. ____ A description of equipment and materials, controls, crew size, job responsibilities, and operations and maintenance procedures for each activity in which lead is disturbed and potentially emitted;

2. ____ A description of specific control methods (wet methods, engineering controls, etc.) that will be used to ensure workers are not exposed above the PEL;

3. ____ Technology considered in meeting the Cal/OSHA PEL;

4. ____ Air monitoring data documenting sources of lead emissions;

5. ___ A detailed implementation schedule for the compliance plan, including the schedule for inspections by a competent person;

6. ___ A description of the lead work practice program which will be used to control worker exposures. This includes the use of protective work clothing, equipment, hygiene facilities and practices, and housekeeping practices;

7. ____ A description of the steps the Contractor or subcontractor will take to minimize the generation of hazardous waste produced on this project. This includes, but is not necessarily limited to how the contractor will separate waste streams. For example, how will the Contractor or subcontractor will keep potentially hazardous waste such as paint chips and dust from being disposed of with other potentially non-hazardous construction materials and debris.

b. ___ Copy of the Contractor or subcontractor's written respirator program in accordance with the requirements of 8 CCR 1544.

c. ___ Proof that all employees expected to wear respirators on this project have medical approval to wear a respirator.

d. ____ Copies of respiratory fit-tests for all workers expected to wear a respirator on this project. Fit testing must be done as required by and in accordance with 8 CCR 1544.

e. Proof of training required by Part 1.5 for type of work employee will do.

1. ___ Proof of Hazard Communication Training for Lead for those exposed to lead or who will perform trigger tasks for less than one hour. *(Proof may be a certificate or written statement stating training was completed and a list of names of those individuals who were trained. Proof of this training is not needed if employee provides proof of training required by items e. 2, or e. 3.)*

2. ____ Proof of training in compliance with 8 CCR 1532.1 (l)(2) for all employees who will conduct trigger tasks as defined in 8 CCR 1532.1 (d)(2) for more than one hour or who will reasonably be expected to be exposed to lead above the Action Level. *(Proof may be a certificate or written statement stating training was completed and*

a list of names of those individuals who were trained.) Not required if providing proof of training required in item e.3 and/or item e.4.

3. ___ Proof of CDPH lead certification for those workers who will conduct trigger tasks as defined in 8 CCR 1532.1 (d)(2) or will reasonably be expected to be exposed to airborne levels of lead above the PEL. This is required for this work on all projects that will disturb more than 100 square feet of lead-containing material. *(Proof of certification will be a currently valid CDPH certification card as a worker or supervisor. Workers who can show proof of a valid course completion form and application being submitted to CDPH, will be allowed to work while awaiting full certification from CDPH.)*

4. ____ Proof of current CDPH certification as a lead supervisor for the on-site competent person for projects involving the conduction of trigger tasks or other activities reasonably expected to exceed the PEL. This is required for this work on all projects that will disturb more than 100 square feet of lead-containing material. (*Proof of valid certification will be a currently valid CDPH certification card)*

5. ____ If exception to requirement for CDPH certified supervisor listed in Part 1.5.3 is requested, then provide proof of CDPH certified supervisor who will verify containment, personal protection and work practices, and will be able to respond to the project within two hours of request by the Project Monitor. *(Only applicable for paint scraping work done prior to the demolition of buildings or structures.)*

6. ____ Workers and supervisors must be trained in accordance with the US EPA RRP regulations for painting activities.

f. ____ Copies of all current SDS for chemicals used on this project.

g. ____ Manufacturers' certifications that high efficiency particulate air (HEPA) vacuums, pressure differential units and other local exhaust ventilation equipment conform to ANSI Z9.2-79 for all HEPA-filtered equipment that will be used on this project.

h. ____ Name and contact information of independent testing company who will challenge test all vacuums and air filtration devices used on this project (in interior spaces).

I. ___ Name and contact information for laboratory who will analyze air samples or waste samples and documentation of their certification to conduct such analysis.

j. _____ Name of Waste Transporter who will transport hazardous waste on this project and documentation that the Transporter is allowed to transport lead hazardous waste.

k. ____ Name of Waste Landfill to which lead hazardous waste will be sent and documentation that such landfill is allowed to accept such waste.

l. ___ Should waste water filtration be required on this project, submit manufactures documentation pertaining to the capability of waste water filters to filter particles of, at a minimum, five micrometers in size.

m ____ List of all rented equipment to be used within a lead regulated area, or a statement that no rental equipment will be used on this project.

1. ____ If rental equipment is to be used, submit written statements from each rental company indicating the rental company's acknowledgment that the equipment is provided for and may be used in areas where airborne levels of asbestos and/or lead may be present.

n. ____ Submit emergency plans. At a minimum submit the following:

1. ____ Submit non-emergency telephone numbers, other then 911, for the appropriate Police, Sheriff, and Fire Departments.

2. ____ Name, pager or cell phone numbers of the on-site supervisor and his immediate company supervisor.

3. ____ Submit detailed written directions from the project site to the medical facility to be used in case of an emergency. Include a map which sufficiently shows the route to be taken from the site to the designated medical facility.

4. ____ Submit written emergency procedures pertinent to the work to be performed and which can be implemented by site personnel if the need arises.

o. ____ Local sanitation district Wastewater Discharge Permit for Surface Washers (if required).

p.____ Cal OSHA Notification. This is required for this work on all projects that will disturb more than 100 square feet of lead-containing material.

q.____ RRP Notification. This is required to be submitted to the District if lead based paint will be disturbed in areas occupied or used by children under the age of six, such as Kindergarten or young child daycare.

The above listed documents must be provided in the time specified in the project documents prior to the start of work that will disturb lead. Under no circumstances will workers or supervisors be allowed to work on this project prior to the receipt of this documentation by the Owner and/or Project Monitor. All delays resulting from the failure of the Contractor and/or subcontractors to provide this information in the required time frame is solely the responsibility of the Contractor and/or subcontractor.

Name, Signature, and Contact Information of Contractor's Personnel Completing Pre-Start Submittal Package

NAME: _____
(Print or Type)

SIGNATURE: _____

Telephone: _____

Fax: _____

Mailing Address: _____

_____

This Specification was Developed By:

Jose Hernandez
CDPH #10754
May 5, 2026

Phone: (916) 632-6800
Fax: (916) 632-6812

PART 5.0 RESULTS OF LEAD TESTING

Paints/Coatings/ Materials Determined to be Lead Containing Paint (LCP)		
Paint/Coating Color or Material	**Lead Content (ppm)**	**Component/Location**
Blue Paint	34	Interior Metal Door Frames and Doors / Throughout Gym Building Where Found

LCP - Materials/coatings/paints which contain measurable amounts of lead. The disturbance of these materials/coatings/paints is regulated by Cal/OSHA.

ALL other paints, coatings, glazed ceramic tiles, and other suspect for lead materials should be assumed to contain measurable amounts of lead and classified as lead-containing paint.

A lead in paint inspection was conducted by Entek and a final report was prepared on May 5, 2026.

C:\Users\JoseHernandez\Entek Consulting Group, Inc\Entekgroup - Documents\Clients\Sacramento City USD\26-8135 Umoja Intl Academy, Gym - AsbPb\Specs\Lead in Construction Specs Umoja Gym 5-5-26.wpd

OTHER HAZARDOUS MATERIALS

POLYCHLORINATED BIPHENYLS (PCB's) LIGHT BALLAST HANDLING PROCEDURES

The Contractor may be instructed to remove light fixtures which contain light ballasts during demolition/ renovation activities specified in the contract documents. These light ballasts typically contain PCBs in the oil used as coolant and lubricant. Any ballast containing PCBs is to be considered a"Hazardous Waste", and the Contractor is responsible for ensuring personnel who perform PCB related work (inspection, removal, clean-up) are trained and qualified to do so. All workers must also follow current OSHA regulations including 29 CFR 1910.120 and 8 CCR 5192, as well as other applicable federal, state and local laws and regulations.

PCB Light Ballasts

All light ballasts manufactured through 1978 are magnetic ballasts which contain PCBs. Installation of ballasts manufactured prior to 1978 continued for several more years. As a result it can be expected that any building constructed before 1980 which has not had a complete lighting retrofit is likely to have PCB containing ballasts. Therefore, unless the ballast is electronic (this type is PCB free), determined by testing not to contain PCBs, or the manufacturers label on the ballast states "No PCBs", it is assumed all light ballasts on this site contain PCB's, and must therefore be handled as a hazardous waste by the Contractor. The Contractor may have other options for disposal of any light ballasts found not to contain PCB's.

Light Ballast Inspection

Contractor should disconnect all power and de-energize all electrical equipment to be impacted prior to performing inspection of electrical devices scheduled for removal or replacement. This de-energizing should be performed by or under the supervision of a licensed electrician. Contractor shall inspect each ballast prior to its removal to determine if the ballast is leaking, if oily residue is present on the exterior of the ballast or the ballast has been damaged resulting in a leak. Upon discovering and prior to removal of any oil coated, leaking, or damaged ballast Contractor shall contact Owners representative to discuss work procedures, waste requirements, etc.

Handling Work Practices of Undamaged Light Ballasts

Handling of ballasts shall be consistent with existing ballast conditions. While a ballast may not initially indicate any damage or leakage to be present, it may become damaged or begin to leak for any number of reasons during the removal and handling process. Any skin contact will probably constitute overexposure to PCBs since they are easily absorbed through the skin. It is recommended any personnel who will perform PCB related work should at a minimum wear protective clothing, including chemically-resistant gloves, goggles, boots, and disposable coveralls.

Handling Work Practices of Damaged Light Ballasts

Handling of damaged ballasts shall be performed in a manner consistent with existing and current federal, state and local laws and regulations. Clean-up of spills, or contaminated surfaces will require the use of specifically trained and properly protected personnel utilizing state of the art work practices, removal equipment, and materials. The Owners representative must be notified prior to the performance of this type of work.

PCB Containing Waste

All PCB containing light ballasts, removed by the Contractor, shall be placed in leak tight approved containers (metal barrels) until they are removed from the site by a waste transporter permitted to haul hazardous materials. Barrels must not be loaded in excess of their approved capacity. For most barrels this is 750 pounds. No other materials except, a sufficient amount of absorbent packing material, shall be included with the light ballasts.

The Contractor should contact their waste hauler prior to the start of work for information pertaining to recommendations or the waste haulers stated requirements for packing PCB containing ballasts. However, at a minimum, the absorbent packing material should be added to the bottom of the waste barrel prior to the first ballast. Absorbent packing material should then be added intermittently as necessary to encase the ballasts as the waste barrel is being filled. When the waste barrel is filled, or no more light ballasts will be added, additional absorbent packing material should be added to completely cover the ballasts and the container then sealed.

Contractor is also responsible for appropriate labeling of waste barrels and securing of lids to meet federal and/or state requirements while being stored on the site.

All leaking or damaged ballasts must be handled in accordance with federal and state disposal requirements and shall be separated from undamaged ballasts in preparation for incineration at an appropriately licensed facility.

The Contractor is responsible for all costs associated with the removal, packing, loading, shipping, and disposal of each barrel of waste generated during this project. The Contractor is also responsible for obtaining and properly completing any Uniform Hazardous Waste Manifests needed for the disposal of PCB waste. However, the Contractor **SHALL NOT** sign any Uniform Hazardous Waste Manifests for the Owner.

Non-PCB Light Ballasts

Non-PCB light ballasts are considered a hazardous waste in California and the contractor is responsible for collection, packaging, labeling, and holding this waste stream for proper disposal. Non-PCB light ballasts shall be shipped for disposal or recycle by the Contractor.

UNIVERSAL WASTE LAMP HANDLING PROCEDURES

The Contractor may be instructed to remove light fixtures which contain lamps which are designated as "Universal Waste" during demolition/renovation activities specified in the contract documents. If the Contractor is instructed to remove such fixtures the following handling procedures shall be followed.

Universal Wastes

Universal wastes are hazardous wastes that are more common and pose a lower risk to people and the environment than other hazardous wastes. Federal and State regulations identify universal wastes. The regulations, called the "Universal Waste Rule," are in the California Code of Regulations (CCR), title 22, division 4.5, chapter 23.

Universal Waste Lamps

Universal Waste Lamp, also referred to as "lamp" is defined as the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum. Examples of common universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps. Any lamp which is not spent and has been designated to be reused is not classified as a waste and does not meet the requirements of a hazardous waste or a universal waste.

Mercury-added lamps

Mercury-added lamps (effective February 9, 2004): Fluorescent tubes and several other types of lamps (not incandescent light bulbs) contain a small amount of mercury that is necessary for their operation. Currently, most fluorescent lamps contain enough mercury to be a hazardous waste.

Universal Waste Lamp Disposal

Spent lamps typically contain concentrations of mercury exceeding the established Total Threshold Limit Concentration and/or the Soluble Threshold Limit Concentration values. Therefore, these lamps must be sent to an authorized recycle facility, or to a universal waste consolidator for shipment to an authorized recycling facility.

At a minimum the lamps must be packaged in boxes/packages/containers which are structurally sound, adequate to prevent breakage, and compatible with the content of the lamps. These packages must remain closed and be free of damage which could cause leakage under reasonably foreseeable conditions.

Each container shall be labeled or marked clearly with one of the following phrases: "Universal Waste–Lamp(s)," or "Waste Lamp(s)." or "Used Lamp(s)".

Documentation in the form of a log, invoice, manifest, bill of lading or other shipping document is required to be submitted to the Owner's Representative for each shipment of waste from the project site. This documentation shall include: name and address of generator and address of site waste is generated on, quantity of lamps to be shipped, date of shipment, name and address of hauler, and name and address of waste facility receiving the waste.

Hazardous Waste Designation

Any lamp which is not designated for recycling or continued use in a different fixture for which the lamp is manufactured for use in must be handled, managed, and disposed of as a hazardous waste in accordance with Cal/EPA Title 22. Since all spent lamps are required to be recycled the Owner will not approve of the disposal of lamps as hazardous without consultation and review of the specific circumstances which warrant this change in designation.

MERCURY SWITCHES

Thermostat switches that contain mercury are considered a hazardous waste if removed and disposed. Where the contract requires removal of thermostat switches, the contractor shall follow all requirements for packaging and disposal of these mercury containing wastes.

SMOKE DETECTORS WHICH MAY CONTAIN A RADIOACTIVE ELEMENT

The Contractor shall be responsible for the removal of any and all smoke detectors which may contain a radioactive element, which may be present in any building or corridor prior to the demolition of any building included in this project. These types of detectors are easily identified by reviewing the label which is usually found on the back of the detector. Older units may display the international radiation symbol (three bladed propeller) and the radioactive content. Newer units state the radioactive content and their Nuclear Regulatory Agency (NRC) license number.

The Contractor shall be responsible for contacting the manufacturer of any smoke detector with a radioactive element present to determine their return policies. The California Department of Toxic Substance Control (DTSC) has stated that it is a condition of the manufacturers NRC license that they must accept returned units for disposal. The Contractor shall be responsible for all costs associated with removing, packaging, and shipping of the detectors in compliance with the manufacturers policies and procedures.

Contractor shall submit to the Owner a letter from the manufacturer which includes the number of units received, date received, and acceptance of the shipment for disposal by that manufacturer.

Additional Waste Management Requirements

The Contractor is responsible for managing lamps in a manner which prevents release of any universal waste or component of a universal waste to the environment. The Contractor is also responsible for the immediate clean up of materials (mercury or other hazardous constituents) released by a lamp broken during removal or otherwise damaged while being handled into a container or containers designed to accommodate the resulting waste and its contents.

The Contractor is responsible for training employees in proper handling, packaging, storing and labeling the universal waste, as well as, how to respond to releases (66273.13). This may be accomplished by providing employees written instructions or posting these instructions in the area where the universal waste lamps are being stored.

The Contractor is responsible for all costs associated with the removal, packing, loading, shipping, clean up and disposal of hazardous materials removed during this project, and any waste generated due to breakage during this project. The Contractor is also responsible for obtaining and properly completing any Uniform Hazardous Waste Manifests needed for the disposal of lamp waste. However, the Contractor **SHALL NOT** sign any Uniform Hazardous Waste Manifests for the Owner.

It **SHALL** be the responsibility of the Contractor to contact the Owner in advance of the scheduled pick up time and date so the waste materials can be visually inspected for proper packing, and to have the Uniform Hazardous Waste Manifest properly signed by a Owner representative.

MOLD CONTAMINATED BUILDING MATERIALS

During the course of conducting the construction related project, the contractor may discover water damaged building components which may also have visible or suspect mold on building materials. Mold can be harmful to humans depending upon the amount of exposure and type of exposure; therefore, it is incumbent of the contractor to take precautions in the event of the discovery of mold contaminated building materials.

If mold contaminated building materials are discovered on the project, it should be brought to the attention of the project manager. In addition, any structural wood members should also be closely examined for possible dry rot and decay and brought to the attention of the project manager. Precautions should be implemented by the contractor to protect his/her employees from exposures to mold from both skin contact and inhalation exposures. Employees should be trained in accordance with the Cal/OSHA Hazard Communication Standard for mold hazards.

If this project involves asbestos related work, the work practices and worker protection for asbestos is very similar to mold related work. Workers performing asbestos related demolition of building components are required to be protected in accordance with Cal/OSHA Title 8 1529 Asbestos in Construction regulations. Workers performing asbestos related work are required to wear respirators with P-100 (HEPA) filters, and whole body disposable coveralls while removing the building materials within negative pressure HEPA filtered work enclosures. These same asbestos work practices defined in Title 8 1529 and in other specifications for this project shall apply to any mold contaminated building materials.

Any mold contaminated building materials shall be removed from the work environment in sealed bags. If the building materials have been determined to contain asbestos, the default criteria for handing, packaging, labeling, and disposal of the waste material shall be the Cal/OSHA, Federal EPA, and D.O.T. regulations for asbestos waste. If the mold impacted materials have been determined not to contain asbestos, the materials shall be placed in sealed six mil plastic bags and can be disposed as non-hazardous waste. If the mold impacted building components are painted, lead in the paint may be the determinant for disposal. Refer to the Lead in Construction specifications for handling of painted components for lead waste issues.

FREON

All refrigerant systems at the buildings containing Freon and other fluorocarbon products associated with heating, ventilating, and air-conditioning (HVAC) systems, or freezers, refrigerators, etc. if removed in the planned renovation or demolition project, shall be removed from the mechanical systems and recycled in accordance with Cal/EPA requirements.

CRYSTALLINE SILICA

Cal/OSHA Title 8 1532.3. Occupational Exposures to Respirable Crystalline Silica require all employers to control employee exposures to silica dust during construction related activities. The contractor is responsible for following all of the requirements in the silica regulations established by Cal/OSHA in Title 8 section 1532.3. Below are some of the key components related to engineering controls specific to different tasks. Below are excepts from the silica standards; however, the contractor shall familiarize themselves with all of the requirements in this regulation.

(C) Specified exposure control methods. (1) For each employee engaged in a task identified on Table 1, the employer shall fully and properly implement the engineering controls, work practices, and respiratory protection specified for the task on Table 1, unless the employer assesses and limits the exposure of the employee to respirable crystalline silica in accordance with subsection (d).

All employers shall refer to “Table 1 - Specified Exposure Control Methods When Working With Materials Containing Crystalline Silica” which identify the specific Equipment/Task, required Engineering and Work Practice Control Methods, and the required respiratory protection based on number of hours for the specific tasks. The contractor shall implement at least one of the work practices and control measures for the work activity they chose to implement.

(3) Where an employee performs more than one task on Table 1 during the course of a shift, and the total duration of all tasks combined is more than four hours, the required respiratory protection for each task is the respiratory protection specified for more than four hours per shift. If the total duration of all tasks on Table 1 combined is less than four hours, the required respiratory protection for each task is the respiratory protection specified for less than four hours per shift.

(2) When implementing the control measures specified in Table 1, each employer shall:

(A) For tasks performed indoors or in enclosed areas, provide a means of exhaust as needed to minimize the accumulation of visible airborne dust;

(B) For tasks performed using wet methods, apply water at flow rates sufficient to minimize release of visible dust;

(C) For measures implemented that include an enclosed cab or booth, ensure that the enclosed cab or booth:

1. Is maintained as free as practicable from settled dust;
2. Has door seals and closing mechanisms that work properly;
3. Has gaskets and seals that are in good condition and working properly;
4. Is under positive pressure maintained through continuous delivery of fresh air;
5. Has intake air that is filtered through a filter that is 95% efficient in the 0.3-10.0 μm range (e.g., MERV-16 or better); and
6. Has heating and cooling capabilities.

(d) Alternative exposure control methods. For tasks not listed in Table 1, or where the employer does not fully and properly implement the engineering controls, work practices, and respiratory protection described in Table 1:

(1) Permissible exposure limit (PEL). The employer shall ensure that no employee is exposed to an airborne concentration of respirable crystalline silica in excess of 50 $\mu g/m^3$, calculated as an 8-hour TWA.

(2) Exposure assessment.

(A) General. The employer shall assess the exposure of each employee who is or may reasonably be expected to be exposed to respirable crystalline silica at or above the action level in accordance with either the performance option in subsection (d)(2)(B) or the scheduled monitoring option in subsection (d)(2)(C).

(B) Performance option. The employer shall assess the 8-hour TWA exposure for each employee on the basis of any combination of air monitoring data or objective data sufficient to accurately characterize employee exposures to respirable crystalline silica.

(C) Scheduled monitoring option.

1. The employer shall perform initial monitoring to assess the 8-hour TWA exposure for each employee on the basis of one or more personal breathing zone air samples that reflect the exposures of employees on each shift, for each job classification, in each work area. Where several employees perform the same tasks on the same shift and in the same work area, the employer may sample a representative fraction of these employees

in order to meet this requirement. In representative sampling, the employer shall sample the employee(s) who are expected to have the highest exposure to respirable crystalline silica.

2. If initial monitoring indicates that employee exposures are below the action level, the employer may discontinue monitoring for those employees whose exposures are represented by such monitoring.

3. Where the most recent exposure monitoring indicates that employee exposures are at or above the action level but at or below the PEL, the employer shall repeat such monitoring within six months of the most recent monitoring.

4. Where the most recent exposure monitoring indicates that employee exposures are above the PEL, the employer shall repeat such monitoring within three months of the most recent monitoring.

5. Where the most recent (non-initial) exposure monitoring indicates that employee exposures are below the action level, the employer shall repeat such monitoring within six months of the most recent monitoring until two consecutive measurements, taken seven or more days apart, are below the action level, at which time the employer may discontinue monitoring for those employees whose exposures are represented by such monitoring, except as otherwise provided in subsection (d)(2)(D).

Prepared By:

Jose Hernandez
Entek Consulting Group, Inc.
May 5, 2026

C:\Users\JoseHernandez\Entek Consulting Group, Inc\Entekgroup - Documents\Clients\Sacramento City USD\26-8135 Umoja Intl Academy, Gym - AsbPb\Specs\Other Haz Mat Req Umoja Gym 5-5-26.wpd