



**ENTEK  
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**HAZARDOUS MATERIALS SURVEY  
FINAL REPORT**

**OWNER/CLIENT**

**Sacramento City Unified School District  
Facilities Support Services  
425 1<sup>st</sup> Avenue  
Sacramento, CA 95818**

**CONTACT**

**Mr. Chris Ralston  
Director III**

**SURVEY ADDRESS**

**Alice Birney TK-8 Public Waldorf School  
6251 13<sup>th</sup> Street  
Sacramento, CA 95831**

**BUILDING(S) SURVEYED**

**Buildings A, B, C, D, E, F, G, H, J, and K  
Modernization Project**

**PREPARED BY**

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CAC #22-6995 and CDPH I/A# 10754  
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**Entek Project #23-6967**

**December 20, 2023**



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## Executive Summary

Entek Consulting Group, Inc. (Entek) is pleased to provide Mr. Chris Ralston, Director III for the Sacramento City Unified School District with this hazardous materials survey report regarding the upcoming modernization project at Alice Birney TK-8 Public Waldorf School located at 6251 13<sup>th</sup> Street in Sacramento, California. It is Entek's understanding that the general scope of work that will be completed includes impact to the flooring and cove base in most buildings on campus, the roofs of the gym and classroom buildings, wall systems inside select buildings, exterior stucco systems on select buildings, and paints on the interior and exterior of the buildings.

The purpose of the inspection was to comply with US EPA NESHAP requirements and the Sacramento Metropolitan Air Quality Management District (SMAQMD) which has jurisdiction for this project site to determine if asbestos containing materials are present which may be impacted during the upcoming modernization project of the Alice Birney TK-8 Public Waldorf School. Materials were also sampled for lead content for compliance with Cal/OSHA lead in construction regulations.

The United States Environmental Protection Agency, National Emission Standards for Hazardous Air Pollutants (US EPA NESHAP), 40 CFR Part 61 - Nov. 20, 1990, requires an owner or operator of a demolition or renovation project to thoroughly inspect the affected facility or part of the facility where the demolition or renovation operation will occur for the presence of asbestos-containing materials (ACM) prior to the commencement of that project.

The attached drawings show approximate sample locations and also identify those bulk sample materials analyzed and found to contain asbestos greater than 1% with a (+) after the sample number. Materials analyzed and found to contain less than 1% asbestos or reported as none detected have a (-) after each sample number.

Contractors and other individuals who view the sample locations and associated results indicated with either a (-) or a (+) on the drawings to make determinations take the risk of misidentifying a material and may arrive at determinations which are in direct conflict with the written findings of this report. This use of the drawings and the information provided on it relating to individual sample results in determining if a material does or does not contain asbestos is not recommended.

This is a summary of the report. The report must be read in its entirety, and the reader must review all the detailed information provided in the body of the report prior to making any interpretations, or conclusions pertaining to the information. Any conclusions made by the reader about the information provided in the body of this report which are contradictory or not included in this report are the responsibility of the reader.

### Asbestos

On November 20 and November 21, 2023, Entek conducted a survey specific to areas designated by the Owner's Representative which included the interior flooring and cove base, wall systems, exterior areas, and roofs of the school buildings included in this survey.

The results of testing for asbestos during this survey indicate asbestos is present in the following materials throughout the buildings mentioned above:

*Building C, Classroom 7*

- Black Mastic Associated with the Green Mottled 12" x 12" Vinyl Floor Tiles

*Assumed at Exteriors of Buildings A, B, C, D, and H*

- Black Mastic found between Metal Flashing and Stucco Wall Systems – Assumed behind flashing between the covered walkway roof and stucco walls of the buildings

During the sampling process of the stucco wall system next to the metal flashing, sample number 61C, a sample of black mastic was collected with the sample of the stucco. The black mastic was determined by the laboratory to contain asbestos unlike the stucco which was found to not contain asbestos.

All other materials collected were determined to be none detected for asbestos. Specifics pertaining to individual materials are found in later parts of this report.

Lead

Entek investigated existing paints and applied coatings to determine if lead was present in these materials. The materials detailed in the following list were all found to contain more than 5,000 parts per million (ppm) lead and are classified as lead-based paint (LBP). If more than 100 square feet of these materials are impacted by a "trigger task", prior notification to Cal/OSHA will be required.

- White Paint over Orange Paint on Interior Wood Ceiling - Observed throughout ceilings within Buildings E & F
- Off-White Paint on Exterior Metal Flashing - Observed throughout Metal Trims between Stucco and Roof Systems at Buildings A, B, C, D, and H

The paints detailed in the following list were determined to contain lead in amounts less than 5,000 ppm and are classified as lead containing paint (LCP). Any work designated by California Occupational Safety Health Administration (Cal/OSHA) as a "trigger task" which will impact these paints, coatings, or materials must be done by properly trained personnel, in compliance with all lead related Cal/OSHA regulations and requirements.

- Light Gray Paint over Green Paint on Interior Plaster Walls - Observed throughout wall systems within Building A
- White Paint over Beige Paint on Interior Wood Window Components - Observed on all Window Systems within Building H
- Brown/Red Paint on Exterior Wood Fascia - Observed throughout Fascia's of the Buildings A, B, C, D, and H

All other sampled paints were found not to be above the laboratory detection limit of 100 ppm.

## Introduction

This report presents results of an asbestos and lead survey performed by Entek which included specific interior and exterior areas included in the Alice Birney TK-8 Public Waldorf School Modernization Project. The survey did not include the portable building roofing systems since they are not planned for renovation. The Alice Birney TK-8 Public Waldorf School is located at 6251 13<sup>th</sup> Street in Sacramento, California.

The inspection was conducted by Mr. Jose Hernandez and Mr. Steven Hopper on November 20 and 21, 2023. Mr. Hernandez is a Cal/OSHA Certified Asbestos Consultant (CAC) and a State of California Department of Public Health (CDPH) certified Lead Inspector/Assessor. Mr. Hopper is a State of CDPH certified Lead Sampling Technician.

## Building Description

The Alice Birney TK-8 Public Waldorf School is comprised of an Administration/Kindergarten building, Multipurpose Room/Kitchen building, multiple classroom buildings, portable classroom buildings, and a portable restroom building.

Interior finish materials throughout the buildings include carpet flooring, vinyl floor tile, sheet vinyl flooring, ceramic floor/wall tile, vinyl base cove, drywall wall/ceiling systems, and drop-in acoustic ceiling panels. The above ceiling plenums were not included as part of the modernization project, therefore not included in this report.

Exterior finish materials include stucco, brick and mortar, wood, and metal components. The exterior windows were metal framed with glazing putty on most of the buildings surveyed. The roof systems on buildings surveyed and attached covered walkways consist of asphalt rolled roofing. The roof systems of the portable classroom buildings and exterior window putty are not planned for renovation, therefore not included in this survey.

## Asbestos Inspection and Sample Collection Protocols

Entek included all specific designated interior and exterior materials that are expected to be impacted by the upcoming modernization project in Alice Birney TK-8 Public Waldorf School included in this report.

Entek did not use any demolition methods to look within enclosed wall or ceiling cavities during this investigation. Entek did include all suspect materials observed in, on, or associated with the areas included in this report.

Bulk samples were collected of various materials suspected to contain asbestos by utilizing a power drill and coring tube, cutting the materials with a razor knife, or use of other appropriate hand tools.

Surfacing materials were collected in a statistically random manner representative of the associated homogenous area as required in 40 CFR Part 763, Asbestos-Containing Materials in Schools; Final Rule and Notice, published October 30, 1987, and the Sacramento Metropolitan Air Quality Management District (SMAQMD) Compliance Assistance Advisory published in June 2010.

Miscellaneous materials were collected from each homogenous area in a manner sufficient to determine whether the material is or is not ACM as required in 40 CFR Part 763, Asbestos-Containing Materials in Schools; Final Rule and Notice, published October 30, 1987.

Approximate locations of all samples collected during this inspection are indicated on the "Bulk Asbestos Material Analysis Request Form for Entek", which served as the chain of custody for the samples, and on the building diagrams attached to this report.

### **Asbestos Bulk Sample Results**

There were several materials observed which are considered "suspect" under US EPA guidelines. Under current US EPA guidelines for conducting building inspections for ACM, all "suspect" materials must be assumed to contain asbestos until otherwise determined by laboratory testing.

The samples of materials suspected of containing asbestos were submitted to Asbestech Laboratory, which is a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory to complete this analysis. These samples were subsequently analyzed by polarized light microscopy (PLM) with dispersion staining by the EPA 600R/R-93/116 method.

The US EPA NESHAP and SMAQMD use 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.

A total of 140 bulk samples were collected of all "suspect" materials that were observed during this investigation. 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 are listed in the following table:

Suspect Materials Found to Contain Asbestos Alice Birney TK-8 Public Waldorf School					
Sample ID#'s	Suspect Material	Asbestos Content/Type (%) by PLM	Location	NESHAP - Cal/OSHA Classification	Total Estimated Quantity
12C	Green Mottled 12" x 12" Vinyl Floor Tile, Yellow Mastic, Gray Leveler, Black Mastic	None Detected (Vinyl Floor Tile) None Detected (Yellow Mastic) None Detected (Gray Leveler) <b>1-2% Chrysotile (Black Mastic)</b>	Building C, Classroom 7 – Assumed Present Underneath Vinyl Floor Tile Throughout the Classroom	<b>Category I (Black Mastic)</b>	Up to 300 SF  (Unknown Amount Beneath Vinyl Floor Tile)
*61C	Gray Stucco, White Stucco, Black Mastic	None Detected (Gray Stucco) None Detected (White Stucco) <b>1-5% Chrysotile (Black Mastic)</b>	Buildings A, B, C, D, and H – Exterior at Metal Flashing between Roofs and Stucco Wall Systems	<b>Category II (Black Mastic)</b>	**Up to 280 LF  (Unknown Amount Behind Metal Flashing)

\*Black mastic was present in sample 61C and was found to contain asbestos. This material should be treated separately from the stucco wall system which did not contain asbestos.

\*\*The black mastic was only visible on the upper edge of the metal flashing and may be present behind the flashing, therefore it is undetermined the total quantity of the material.

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 number noted in the tables above start with EGG-23-6967-

The table above provides an estimate of the amount of materials in square feet (SF) or linear feet (LF). Contractors are responsible for quantifying the exact quantity of materials impacted by the renovation or demolition and shall not rely on the quantities in the above Hazardous Materials Survey Report – SCUSD – Alice Birney TK-8 Public Waldorf School

tables.

All other suspect materials sampled were determined to not contain asbestos. Specifics pertaining to the materials sampled and the sample locations can be referenced in Appendix A.

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 this report are for use by the Owner in determining where asbestos containing materials are located, and whether or not 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 suspect 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.

## **Asbestos Regulatory Requirements**

### US EPA

The property included in this survey report is located in Sacramento County. 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 Asbestos).

A demolition is the wrecking, taking out, or burning of any load supporting structural member. A renovation is everything else. Ten day written notification to 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 more than 100 square feet of ACCM or ACM 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 Sampling Results**

A total of 16 bulk samples of the painted surfaces expected to be impacted in the upcoming modernization project were collected and submitted to MicroTest Laboratories, Inc. (MicroTest) located in Rancho Cordova, California. The bulk samples (paint chips/glazing) were analyzed utilizing the NIOSH 7082 method (including the EPA 7000B and EPA 7420 methods) utilizing flame atomic absorption spectroscopy. MicroTest is accredited by the Environmental Laboratory Accreditation Program (ELAP) to perform the analysis. Results of the analysis are listed in the following tables:

<b>Paints/Coatings/ Materials Determined to be Lead Based Paint (LBP)</b>		
<b>Paint/Coating Color or Material</b>	<b>Lead Content (ppm)</b>	<b>Component/Location</b>
White Paint over Orange Paint	12,222	Interior Wood Ceiling Deck / Buildings E and F, Throughout Ceilings
Off-White Paint	6,687	Exterior Metal Flashing / Throughout Metal Trims between Stucco and Roof Systems

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<sup>2</sup>, 5,000 ppm, or 0.5% by weight.

<b>Paints/Coatings/ Materials Determined to be Lead Containing Paint (LCP)</b>		
<b>Paint/Coating Color or Material</b>	<b>Lead Content (ppm)</b>	<b>Component/Location</b>
Light Gray Paint over Green Paint	1,327	Interior Plaster Walls / Building A, Throughout Walls
White Paint over Beige Paint	181	Interior Wood Windows / Building H, Throughout Wooden Window Components
Brown/Red Paint	1,093	Exterior Wood Fascia / Throughout Fascia's of the School Buildings

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

<b>Paints/Coatings/Materials Determined NOT TO Contain Lead (&lt;100 ppm)</b>	
<b>Paint/Coating Color or Material</b>	<b>Building Component</b>
White Paint	Interior Drywall Wall System / Throughout Building A
Pink-White Paint	Interior Drywall Wall System / Throughout Building B
Peach Paint	Interior Drywall Wall System / Throughout Building B
Light Green-White Paint	Interior Drywall Wall System / Throughout Building D
White Paint	Interior Drywall Wall System / Throughout Building E
Beige Paint over Gray Paint	Interior Metal Wall Panel / Throughout Wall Panels inside Building F
Light Gray Paint	Exterior Wood Siding / Throughout Exterior of Building K
Blue Paint over White Paint	Interior Drywall Wall System / Throughout Building J
Light Gray Paint	Interior Drywall Wall System / Throughout Restroom Portable
Beige Paint	Interior Drywall Wall System / Throughout Building G

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 limit of detection for the analysis method used. This limit of detection was 100 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**

Entek only inspected the specific designated interior and exterior areas of the Alice Birney TK-8 Public Waldorf School expected to be impacted by the upcoming modernization project. This survey does not include all areas or the other interior or exterior areas of Alice Birney TK-8 Public Waldorf School. Therefore, the information provided in this inspection report may not be used to extend the inspection results to areas not included in this report without additional review and sampling as necessary.

Entek did not perform any destructive sampling to look into ceiling and wall cavities. As a result, it may be possible for materials to be hidden in these areas which are not included in this report. Entek also did not employ any destructive measures on floors of interior spaces or exterior areas covered with asphalt, concrete, or dirt.

If any new materials not listed as having been sampled, or listed as assumed for containing asbestos in this report are discovered, the new material must be assumed to contain asbestos until properly inspected and tested for asbestos content.

Entek’s policy is to retain a full copy of these written documents for three years once the file is closed. At the end of the three-year period the written files will be destroyed without further notice. It is suggested copies of the file(s) are maintained as per your 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.

Prepared By:



Jose Hernandez, CAC, I/A  
Project Manager

Reviewed By:



Blake Howes, CAC, I/A  
Vice President

### Appendices

- A. Asbestos Related Documents
- B. Lead Related Documents
- C. Backup Documents

## **APPENDIX A**

### **ASBESTOS RELATED DOCUMENTS**

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

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**Job:**  
 23-6967 Sacramento City USD  
 Alice Birney Public Waldorf TK-8 School  
 6251 13<sup>th</sup> St., Sacramento, Ca

**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-1  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-01A	Blue 4" vinyl base cove, bldg. A multi-use room north wall east side	NONE DETECTED	Calcite
	White mastic	NONE DETECTED	Calcite
01B	Blue 4" vinyl base cove, bldg. A multi-use room south wall east side	NONE DETECTED	Calcite
	White mastic	NONE DETECTED	Calcite
	Brown mastic	NONE DETECTED	Synthetics
02A	Black 4" vinyl base cove, bldg. A stage north wall east side	NONE DETECTED	Calcite Opagues
	Brown mastic	NONE DETECTED	Synthetics
02B	Black 4" vinyl base cove, bldg. A stage west wall south side	NONE DETECTED	Calcite Opagues
	Brown mastic	NONE DETECTED	Synthetics
	White leveler	NONE DETECTED	Calcite
03A	Beige speckled 2"x2" ceramic floor tile, bldg. B kindergarten 1 toilet room NW side	NONE DETECTED	Granular Mins.
	Gray grout & mortar	NONE DETECTED	Granular Mins.

THE ANALYSIS USES POLARIZED LIGHT MICROSCOPY AND DISPERSION STAINING FOLLOWING E.P.A. METHOD 600/R-93/116. NON-FRIABLE MATERIALS WERE ANALYZED APPLYING THE SAME METHOD. THE LOWER DETECTION LIMIT IS <1 % WITH THE PROVISO THAT PLM MAY NOT DETECT FIBERS <0.25 MICRONS IN DIAMETER THAT MAY BE PRESENT IN SAMPLES SUCH AS FLOOR TILES. IN ACCORDANCE WITH TITLE 22, CCR, SECTION 66261.24(a)(2)(A), THE MCL IS 1%. SAMPLES WERE NOT COLLECTED BY ASBESTECH. THIS REPORT MUST NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE APPROVAL OF ASBESTECH. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT MUST NOT BE USED TO CLAIM PRODUCT ENDORSEMENT BY N.V.L.A.P. OR ANY AGENCY OF THE U.S. GOVERNMENT. ASBESTECH ACCEPTS TECHNICAL RESPONSIBILITY FOR THIS REPORT AND DATE OF ISSUE.



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**Job:**  
 23-6967 Sacramento City USD  
 Alice Birney Public Waldorf TK-8 School  
 6251 13<sup>th</sup> St., Sacramento, Ca

**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-2  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<u>Sample No.</u>	<u>Color/Description</u>	<u>% Type Asbestos</u>	<u>Other Materials</u>
ECG-23-6967-03B	Beige speckled 2"x2" ceramic floor tile, bldg. B kindergarten 2 toilet room NE side	NONE DETECTED	Granular Mins.
	Gray grout & mortar	NONE DETECTED	Granular Mins.
	Black mastic	NONE DETECTED	Tar Binder
04A	Yellow carpet mastic, bldg. B kindergarten 1 NE side	NONE DETECTED	Synthetics
	White leveling compound	NONE DETECTED	Gypsum
04B	Yellow carpet mastic, bldg. B kindergarten 2 NE side	NONE DETECTED	Synthetics
05A	Green mottled 12"x12" vinyl floor tile, bldg. B kindergarten 1 storage room west side	NONE DETECTED	Calcite
	Yellow mastic	NONE DETECTED	Synthetics
05B	Green mottled 12"x12" vinyl floor tile, bldg. B kindergarten 2 storage room west side	NONE DETECTED	Calcite
	Yellow mastic	NONE DETECTED	Synthetics
06A	Gray concrete , bldg. B kindergarten 1 NE side	NONE DETECTED	Granular Mins.

THE ANALYSIS USES POLARIZED LIGHT MICROSCOPY AND DISPERSION STAINING FOLLOWING E.P.A. METHOD 600/R-93/116. NON-FRIABLE MATERIALS WERE ANALYZED APPLYING THE SAME METHOD. THE LOWER DETECTION LIMIT IS <1 % WITH THE PROVISO THAT PLM MAY NOT DETECT FIBERS <0.25 MICRONS IN DIAMETER THAT MAY BE PRESENT IN SAMPLES SUCH AS FLOOR TILES. IN ACCORDANCE WITH TITLE 22, CCR, SECTION 66261.24(a)(2)(A), THE MCL IS 1%. SAMPLES WERE NOT COLLECTED BY ASBESTECH. THIS REPORT MUST NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE APPROVAL OF ASBESTECH. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT MUST NOT BE USED TO CLAIM PRODUCT ENDORSEMENT BY N.V.L.A.P. OR ANY AGENCY OF THE U.S. GOVERNMENT. ASBESTECH ACCEPTS TECHNICAL RESPONSIBILITY FOR THIS REPORT AND DATE OF ISSUE.



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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-3  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-06B	Gray concrete , bldg. B kindergarten 2 NE side	NONE DETECTED	Granular Mins.
	Yellow mastic	NONE DETECTED	Synthetics
07A	Blue 4" vinyl base cove, bldg. B kindergarten 1 north wall	NONE DETECTED	Calcite
	White mastic	NONE DETECTED	Calcite
07B	Blue 4" vinyl base cove, bldg. B kindergarten 2 north wall	NONE DETECTED	Calcite
	White mastic	NONE DETECTED	Calcite
08A	White drywall , bldg. B kindergarten 1 teacher work room SW corner	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite
08B	White drywall , bldg. B kindergarten 2 teacher work room SW corner	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-4  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<u>Sample No.</u>	<u>Color/Description</u>	<u>% Type Asbestos</u>	<u>Other Materials</u>
ECG-23-6967-09A	White orange peel texture, bldg. B kindergarten 1 teacher work room south wall	NONE DETECTED	Calcite
09B	White orange peel texture, bldg. B kindergarten 2 teacher work room south wall	NONE DETECTED	Calcite
09C	White orange peel texture, bldg. B kindergarten 2 teacher work room NE wall	NONE DETECTED	Calcite
10A	Beige speckled 2"x2" ceramic floor tile, bldg. C classroom 3 north restroom SE side	NONE DETECTED	Granular Mins.
	Gray grout & mortar	NONE DETECTED	Granular Mins.
	Yellow mastic	NONE DETECTED	Synthetics
10B	Beige speckled 2"x2" ceramic floor tile, bldg. C classroom 3 south restroom north side	NONE DETECTED	Granular Mins.
	Gray grout & mortar	NONE DETECTED	Granular Mins.
	Yellow mastic	NONE DETECTED	Synthetics
11A	Yellow carpet mastic, bldg. C classroom 3 south side	NONE DETECTED	Synthetics
11B	Yellow carpet mastic, bldg. C classroom 5 NE side	NONE DETECTED	Synthetics

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-5  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-11C	Yellow carpet mastic, bldg. C classroom 7 west side	NONE DETECTED	Synthetics
12A	Green mottled 12"x12" vinyl floor tile, bldg. C classroom 3 west side	NONE DETECTED	Calcite
	Yellow mastic	NONE DETECTED	Synthetics
	Gray leveler	NONE DETECTED	Calcite
12B	Green mottled 12"x12" vinyl floor tile, bldg. C classroom 5 NE side	NONE DETECTED	Calcite
	Yellow mastic	NONE DETECTED	Synthetics
12C	Green mottled 12"x12" vinyl floor tile, bldg. C classroom 7 NE side	NONE DETECTED	Calcite
	Yellow mastic	NONE DETECTED	Synthetics
	Black mastic	1-2 CHRYSOTILE	Tar Binder
13A	Gray concrete , bldg. C classroom 3 north side	NONE DETECTED	Granular Mins.
	Yellow mastic	NONE DETECTED	Synthetics

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-6  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-13B	Gray concrete , bldg. C classroom 7 east side	NONE DETECTED	Granular Mins.
	Yellow mastic	NONE DETECTED	Synthetics
14A	Blue 4" vinyl base cove, bldg. C classroom 3 NE side	NONE DETECTED	Calcite
	White mastic	NONE DETECTED	Calcite
14B	Blue 4" vinyl base cove, bldg. C classroom 5 south wall	NONE DETECTED	Calcite
	White mastic	NONE DETECTED	Calcite
15A	White drywall , bldg. C classroom 3 NE corner adjacent north restroom	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite
15B	White drywall , bldg. C classroom 7 SW corner	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-7  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<u>Sample No.</u>	<u>Color/Description</u>	<u>% Type Asbestos</u>	<u>Other Materials</u>
ECG-23-6967-16A	White orange peel texture , bldg. C classroom 3 north wall adjacent HVAC closet	NONE DETECTED	Calcite
16B	White orange peel texture , bldg. C classroom 5 west wall	NONE DETECTED	Calcite
16C	White orange peel texture , bldg. C classroom 7 west wall	NONE DETECTED	Calcite
17A	Yellow carpet mastic , bldg. D classroom 8 north side	NONE DETECTED	Synthetics
17B	Yellow carpet mastic , bldg. D classroom 10 SE side	NONE DETECTED	Synthetics
17C	Yellow carpet mastic , bldg. D classroom 12 south side	NONE DETECTED	Synthetics
18A	Green mottled 12"x12" vinyl floor tile, bldg. D classroom 8 NE side	NONE DETECTED	Calcite
	Yellow mastic	NONE DETECTED	Calcite
18B	Green mottled 12"x12" vinyl floor tile, bldg. D classroom 10 SW side	NONE DETECTED	Calcite
	Yellow mastic	NONE DETECTED	Synthetics

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-8  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-18C	Green mottled 12"x12" vinyl floor tile, bldg. D classroom 12 NW side	NONE DETECTED	Calcite
	Yellow mastic	NONE DETECTED	Synthetics
19A	Gray concrete, bldg. D classroom 8 north side	NONE DETECTED	Granular Mins.
	Yellow mastic	NONE DETECTED	Synthetics
19B	Gray concrete, bldg. D classroom 12 south side	NONE DETECTED	Granular Mins.
	Yellow mastic	NONE DETECTED	Synthetics
20A	Blue 4" vinyl base cove, bldg. D classroom 10 south wall	NONE DETECTED	Calcite
	White mastic	NONE DETECTED	Calcite
20B	Blue 4" vinyl base cove, bldg. D classroom 12 south wall	NONE DETECTED	Calcite
	White mastic	NONE DETECTED	Calcite

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-9  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-21A	White drywall , bldg. D classroom 9 SW corner	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite
21B	White drywall , bldg. D classroom 11 SW corner	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite
22A	White orange peel texture , bldg. D classroom 9 west wall	NONE DETECTED	Calcite
22B	White orange peel texture , bldg. D classroom 10 west wall	NONE DETECTED	Calcite
22C	White orange peel texture , bldg. D classroom 11 west wall	NONE DETECTED	Calcite
23A	White drywall , bldg. E girl's restroom NW corner	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-10  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<u>Sample No.</u>	<u>Color/Description</u>	<u>% Type Asbestos</u>	<u>Other Materials</u>
ECG-23-6967-23B	White drywall , bldg. E boy's restroom NW corner	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite
24A	White skim coat , bldg. E girl's restroom west wall	NONE DETECTED	Calcite
24B	White skim coat , bldg. E girl's restroom south wall	NONE DETECTED	Calcite
24C	White skim coat , bldg. E boy's restroom west wall	NONE DETECTED	Calcite
25A	White drywall , bldg. F girl's restroom NW corner	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite
25B	White drywall , bldg. F boy's restroom SW corner	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-11  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-26A	White skim coat , bldg. F girl's restroom west wall	NONE DETECTED	Calcite
26B	White skim coat , bldg. F girl's restroom north wall	NONE DETECTED	Calcite
26C	White skim coat , bldg. F boy's restroom west wall	NONE DETECTED	Calcite
27A	Yellow carpet mastic top layer, bldg. H classroom 13 NE side	NONE DETECTED	Synthetics
27B	Yellow carpet mastic top layer, bldg. H classroom 14 NE side	NONE DETECTED	Synthetics
	Gray leveler	NONE DETECTED	Calcite
28A	Brown vinyl floor tile (bottom layer), bldg. H classroom 13 NE side under carpet	NONE DETECTED	Calcite
	Black mastic	NONE DETECTED	Tar Binder
	Yellow mastic	NONE DETECTED	Synthetics

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-12  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-28B	Brown vinyl floor tile (bottom layer), bldg. H classroom 14 NE side under carpet	NONE DETECTED	Calcite
	Black mastic	NONE DETECTED	Tar Binder
	Yellow mastic	NONE DETECTED	Synthetics
29A	Brown mottled 12" vinyl floor tile, bldg. H classroom 13 NW side	NONE DETECTED	Calcite
	Black mastic	NONE DETECTED	Tar Binder
	Yellow mastic	NONE DETECTED	Synthetics
29B	Brown mottled 12" vinyl floor tile, bldg. H classroom 14 SW side	NONE DETECTED	Calcite
	Black mastic	NONE DETECTED	Tar Binder
30A	Brown 4" vinyl base cove, bldg. H classroom 13 north wall	NONE DETECTED	Calcite Opagues
	Yellow mastic	NONE DETECTED	Synthetics
30B	Brown 4" vinyl base cove, bldg. H classroom 14 east wall	NONE DETECTED	Calcite Opagues
	Yellow mastic	NONE DETECTED	Calcite

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-13  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-31A	Yellow carpet mastic, bldg. H classroom 15 NE side	NONE DETECTED	Synthetics
31B	Yellow carpet mastic, bldg. H classroom 15 south side	NONE DETECTED	Synthetics
	Gray leveling compound	NONE DETECTED	Calcite
32A	Beige mottled 12"x12" vinyl floor tile, bldg. H classroom 15 NW side	NONE DETECTED	Calcite
	Yellow mastic	NONE DETECTED	Synthetics
32B	Beige mottled 12"x12" vinyl floor tile, bldg. H classroom 15 SW side	NONE DETECTED	Calcite
	Yellow mastic	NONE DETECTED	Synthetics
33A	Gray 4" vinyl base cove, bldg. H classroom 15 south wall west side	NONE DETECTED	Calcite Opagues
	Yellow mastic	NONE DETECTED	Calcite
33B	Gray 4" vinyl base cove, bldg. H classroom 15 north wall west side	NONE DETECTED	Calcite Opagues
	Yellow mastic	NONE DETECTED	Synthetics

THE ANALYSIS USES POLARIZED LIGHT MICROSCOPY AND DISPERSION STAINING FOLLOWING E.P.A. METHOD 600/R-93/116. NON-FRIABLE MATERIALS WERE ANALYZED APPLYING THE SAME METHOD. THE LOWER DETECTION LIMIT IS <1 % WITH THE PROVISO THAT PLM MAY NOT DETECT FIBERS <0.25 MICRONS IN DIAMETER THAT MAY BE PRESENT IN SAMPLES SUCH AS FLOOR TILES. IN ACCORDANCE WITH TITLE 22, CCR, SECTION 66261.24(a)(2)(A), THE MCL IS 1%. SAMPLES WERE NOT COLLECTED BY ASBESTECH. THIS REPORT MUST NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE APPROVAL OF ASBESTECH. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT MUST NOT BE USED TO CLAIM PRODUCT ENDORSEMENT BY N.V.L.A.P. OR ANY AGENCY OF THE U.S. GOVERNMENT. ASBESTECH ACCEPTS TECHNICAL RESPONSIBILITY FOR THIS REPORT AND DATE OF ISSUE.



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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-14  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-34A	Yellow carpet mastic, bldg. K classroom 16 NE side	NONE DETECTED	Synthetics
34B	Yellow carpet mastic, bldg. K classroom 18 SE side	NONE DETECTED	Synthetics
35A	Gray mottled 12"x12" vinyl floor tile, bldg. K classroom 16 SW side	NONE DETECTED	Calcite
	Black mastic	NONE DETECTED	Tar Binder
35B	Gray mottled 12"x12" vinyl floor tile, bldg. K classroom 18 NW side	NONE DETECTED	Calcite
	Black mastic	NONE DETECTED	Tar Binder
36A	Gray 4" vinyl base cove, bldg. K classroom 16 south wall west side	NONE DETECTED	Calcite Opagues
	Yellow mastic	NONE DETECTED	Calcite
36B	Gray 4" vinyl base cove, bldg. K classroom 18 north wall west side	NONE DETECTED	Calcite Opagues
	Yellow mastic	NONE DETECTED	Synthetics

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-15  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<u>Sample No.</u>	<u>Color/Description</u>	<u>% Type Asbestos</u>	<u>Other Materials</u>
ECG-23-6967-37A	Yellow carpet mastic, bldg. K classroom 17 north side	NONE DETECTED	Synthetics
	Gray leveling compound	NONE DETECTED	Calcite
37B	Yellow carpet mastic, bldg. K classroom 17 south side	NONE DETECTED	Synthetics
	Gray leveling compound	NONE DETECTED	Calcite
38A	Light gray mottled 12"x12" vinyl floor tile, bldg. K classroom 17 NW side	NONE DETECTED	Calcite
	Black mastic	NONE DETECTED	Tar Binder
38B	Light gray mottled 12"x12" vinyl floor tile, bldg. K classroom 17 SW side	NONE DETECTED	Calcite
	Black mastic	NONE DETECTED	Tar Binder
39A	Black 4" vinyl base cove, bldg. K classroom 17 north wall	NONE DETECTED	Calcite Opagues
	Yellow mastic	NONE DETECTED	Synthetics
39B	Black 4" vinyl base cove, bldg. K classroom 17 south wall	NONE DETECTED	Calcite Opagues
	Yellow mastic	NONE DETECTED	Synthetics

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-16  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-40A	Gray mottled 12"x12" vinyl floor tile, bldg. J classroom 19 SE side	NONE DETECTED	Calcite
	Yellow mastic	NONE DETECTED	Synthetics
	Gray leveler	NONE DETECTED	Calcite
40B	Gray mottled 12"x12" vinyl floor tile, bldg. J classroom 19 SW side	NONE DETECTED	Calcite
	Yellow mastic	NONE DETECTED	Synthetics
	Gray leveler	NONE DETECTED	Calcite
41A	Blue mottled 12"x12" vinyl floor tile, bldg. J classroom 19 SE side	NONE DETECTED	Calcite
	Yellow mastic	NONE DETECTED	Synthetics
41B	Blue mottled 12"x12" vinyl floor tile, bldg. J classroom 19 SW side	NONE DETECTED	Calcite
	Yellow mastic	NONE DETECTED	Synthetics
42A	Black 4" vinyl base cove, bldg. J classroom 19 south wall adjacent closet	NONE DETECTED	Opagues
	Yellow mastic	NONE DETECTED	Synthetics

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-17  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-42B	Black 4" vinyl base cove, bldg. J classroom 19 east wall	NONE DETECTED	Opagues
	Yellow mastic	NONE DETECTED	Synthetics
43A	White drywall , bldg. J classroom 19 SE corner	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite
43B	White drywall , bldg. J classroom 19 SW corner	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite
44A	White orange peel texture , bldg. J classroom 19 south wall adjacent closet	NONE DETECTED	Calcite
44B	White orange peel texture , bldg. J classroom 19 north wall adjacent closet	NONE DETECTED	Calcite
44C	White orange peel texture , bldg. J classroom 19 south wall	NONE DETECTED	Calcite

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-18  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<u>Sample No.</u>	<u>Color/Description</u>	<u>% Type Asbestos</u>	<u>Other Materials</u>
ECG-23-6967-45A	Tan speckled sheet vinyl flooring, restroom portable girl's restroom south side at door	NONE DETECTED	Vinyl csal
	White mastic	NONE DETECTED	Calcite
	Black mastic	NONE DETECTED	Synthetics
45B	Tan speckled sheet vinyl flooring, restroom portable boy's restroom south side at door	NONE DETECTED	Vinyl csal
	Black mastic	NONE DETECTED	Synthetics
46A	White drywall , restroom portable boy's restroom SE corner	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite
46B	White drywall , restroom portable girl's restroom SE corner	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite
47A	White skim coat , restroom portable boy's restroom south wall	NONE DETECTED	Calcite

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-19  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-47B	White skim coat , restroom portable boy's restroom north wall	NONE DETECTED	Calcite
47C	White skim coat , restroom portable girl's restroom east wall	NONE DETECTED	Calcite
48A	Light brown wood pattern luxury vinyl tile , bldg. G classroom 21	NONE DETECTED	Vinyl Calcite
	Clear mastic	NONE DETECTED	Synthetics
48B	Light brown wood pattern luxury vinyl tile , bldg. G classroom 23	NONE DETECTED	Vinyl Calcite
49A	Blue 4" vinyl base cove, bldg. G classroom 21	NONE DETECTED	Calcite Opagues
	Yellow mastic	NONE DETECTED	Synthetics
49B	Blue 4" vinyl base cove, bldg. G classroom 23	NONE DETECTED	Calcite Opagues
	Yellow mastic	NONE DETECTED	Calcite

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-20  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<u>Sample No.</u>	<u>Color/Description</u>	<u>% Type Asbestos</u>	<u>Other Materials</u>
ECG-23-6967-50A	White drywall , bldg. G classroom 23	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite
50B	White drywall , bldg. G classroom 20	NONE DETECTED	Gypsum Fibrous Glass
	White joint compound 1	NONE DETECTED	Calcite
	White joint compound 2	NONE DETECTED	Calcite
51A	Black asphalt rolled roofing, roof bldg. B west side	NONE DETECTED	Tar Binder Fibrous Glass
	Gray roofing	NONE DETECTED	Cellulose Pumice
51B	Black asphalt rolled roofing, roof bldg. B east side	NONE DETECTED	Tar Binder Fibrous Glass
	Gray roofing	NONE DETECTED	Cellulose Pumice
51C	Black asphalt rolled roofing, roof bldg. C west side	NONE DETECTED	Tar Binder Fibrous Glass
	Gray roofing	NONE DETECTED	Cellulose Pumice

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-21  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-51D	Black asphalt rolled roofing, roof bldg. C east side	NONE DETECTED	Tar Binder Fibrous Glass
	Gray roofing	NONE DETECTED	Cellulose Pumice
51E	Black asphalt rolled roofing, roof bldg. D west side	NONE DETECTED	Tar Binder Fibrous Glass
	Gray roofing	NONE DETECTED	Cellulose Pumice
51F	Black asphalt rolled roofing, roof bldg. D east side	NONE DETECTED	Tar Binder Fibrous Glass
	Gray roofing	NONE DETECTED	Cellulose Pumice
52A	Black penetration mastic, roof bldg. B east side	NONE DETECTED	Tar Binder Cellulose
52B	Black penetration mastic, roof bldg. C south side	NONE DETECTED	Tar Binder Cellulose
53A	Gray penetration mastic, roof bldg. C east side	NONE DETECTED	Tar Binder Cellulose
	Silver paint	NONE DETECTED	Opagues

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-22  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-53B	Gray penetration mastic, roof bldg. D north side	NONE DETECTED	Tar Binder Cellulose
	Silver paint	NONE DETECTED	Opagues
54A	Black asphalt rolled roofing, roof bldg. H west side	NONE DETECTED	Tar Binder Fibrous Glass
	Gray roofing	NONE DETECTED	Cellulose Pumice
54B	Black asphalt rolled roofing, roof bldg. H east side	NONE DETECTED	Tar Binder Fibrous Glass
	Gray roofing	NONE DETECTED	Cellulose Pumice
55A	Black penetration mastic, roof bldg. H south side	NONE DETECTED	Tar Binder
	Silver paint	NONE DETECTED	Opagues
55B	Black penetration mastic, roof bldg. H north side	NONE DETECTED	Tar Binder
	Silver paint	NONE DETECTED	Opagues

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**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-23  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-56A	Black asphalt rolled roofing, roof covered walkway north side	NONE DETECTED	Tar Binder Fibrous Glass
	Off-white coating	NONE DETECTED	Opagues Granular Mins.
56B	Black asphalt rolled roofing, roof bldg. B south side	NONE DETECTED	Tar Binder Fibrous Glass
	Off-white coating	NONE DETECTED	Opagues
57A	Black asphalt roof patch, roof covered walkway east of bldg. D	NONE DETECTED	Tar Binder Fibrous Glass
	Gray roofing	NONE DETECTED	Cellulose Pumice
57B	Black asphalt roof patch, roof bldg. b near SE corner of bldg. C	NONE DETECTED	Tar Binder Fibrous Glass
	Gray roofing	NONE DETECTED	Cellulose Pumice
58A	White penetration mastic, roof covered walkway north side east of bldg. D	NONE DETECTED	Opagues Granular Mins.
	Black mastic	NONE DETECTED	Tar Binder Cellulose

THE ANALYSIS USES POLARIZED LIGHT MICROSCOPY AND DISPERSION STAINING FOLLOWING E.P.A. METHOD 600/R-93/116. NON-FRIABLE MATERIALS WERE ANALYZED APPLYING THE SAME METHOD. THE LOWER DETECTION LIMIT IS <1 % WITH THE PROVISO THAT PLM MAY NOT DETECT FIBERS <0.25 MICRONS IN DIAMETER THAT MAY BE PRESENT IN SAMPLES SUCH AS FLOOR TILES. IN ACCORDANCE WITH TITLE 22, CCR, SECTION 66261.24(a)(2)(A), THE MCL IS 1%. SAMPLES WERE NOT COLLECTED BY ASBESTECH. THIS REPORT MUST NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE APPROVAL OF ASBESTECH. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT MUST NOT BE USED TO CLAIM PRODUCT ENDORSEMENT BY N.V.L.A.P. OR ANY AGENCY OF THE U.S. GOVERNMENT. ASBESTECH ACCEPTS TECHNICAL RESPONSIBILITY FOR THIS REPORT AND DATE OF ISSUE.



ASBESTECH  
 11151 Sun Center Drive, Suite B  
 Rancho Cordova, California 95670  
 Tel.(916) 481-8902 asbestech@sbcglobal.net

**Client:**  
 Entek Consulting Group, Inc.  
 4200 Rocklin Rd., Suite 7  
 Rocklin, CA 95677

**Job:**  
 23-6967 Sacramento City USD  
 Alice Birney Public Waldorf TK-8 School  
 6251 13<sup>th</sup> St., Sacramento, Ca

**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-24  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-58B	White penetration mastic, roof covered walkway north side	NONE DETECTED	Opagues Granular Mins.
	Black mastic	NONE DETECTED	Tar Binder Cellulose
59A	Gray penetration mastic, roof bldg. C east side	NONE DETECTED	Tar Binder Cellulose
	White mastic	NONE DETECTED	Opagues Granular Mins.
59B	Gray penetration mastic, roof bldg. D north side	NONE DETECTED	Tar Binder Cellulose
	Silver paint	NONE DETECTED	Opagues
60A	Black asphalt rolled roofing, roof covered walkway north of bldg. A	NONE DETECTED	Tar Binder Fibrous Glass
60B	Black asphalt rolled roofing, roof bldg. A east lower roof	NONE DETECTED	Tar Binder Fibrous Glass
61A	Gray stucco, exterior bldg. D east wall	NONE DETECTED	Granular Mins.
	White stucco	NONE DETECTED	Granular Mins.

THE ANALYSIS USES POLARIZED LIGHT MICROSCOPY AND DISPERSION STAINING FOLLOWING E.P.A. METHOD 600/R-93/116. NON-FRIABLE MATERIALS WERE ANALYZED APPLYING THE SAME METHOD. THE LOWER DETECTION LIMIT IS <1 % WITH THE PROVISO THAT PLM MAY NOT DETECT FIBERS <0.25 MICRONS IN DIAMETER THAT MAY BE PRESENT IN SAMPLES SUCH AS FLOOR TILES. IN ACCORDANCE WITH TITLE 22, CCR, SECTION 66261.24(a)(2)(A), THE MCL IS 1%. SAMPLES WERE NOT COLLECTED BY ASBESTECH. THIS REPORT MUST NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE APPROVAL OF ASBESTECH. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT MUST NOT BE USED TO CLAIM PRODUCT ENDORSEMENT BY N.V.L.A.P. OR ANY AGENCY OF THE U.S. GOVERNMENT. ASBESTECH ACCEPTS TECHNICAL RESPONSIBILITY FOR THIS REPORT AND DATE OF ISSUE.



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 Rocklin, CA 95677

**Job:**  
 23-6967 Sacramento City USD  
 Alice Birney Public Waldorf TK-8 School  
 6251 13<sup>th</sup> St., Sacramento, Ca

**BULK ASBESTOS ANALYSIS REPORT**

LAB JOB # 70857-25  
 Date/Time Collected: 11/20-21/23  
 Date Received: 11/27/23

NVLAP Lab Code 101442-0  
 CDPH # 1153  
 Date Analyzed: 12/1/23

<i>Sample No.</i>	<i>Color/Description</i>	<i>% Type Asbestos</i>	<i>Other Materials</i>
ECG-23-6967-61B	Gray stucco, exterior bldg. C east wall	NONE DETECTED	Granular Mins.
	White stucco	NONE DETECTED	Granular Mins.
61C	Gray stucco, exterior bldg. B east wall	NONE DETECTED	Granular Mins.
	White stucco	NONE DETECTED	Granular Mins.
	Black mastic	1-5 CHRYSOTILE	Tar Binder Calcite
62A	Black asphalt, exterior east playground NE side	NONE DETECTED	Tar Binder Granular Mins.
62B	Black asphalt, exterior east playground west side	NONE DETECTED	Tar Binder Granular Mins.

THE ANALYSIS USES POLARIZED LIGHT MICROSCOPY AND DISPERSION STAINING FOLLOWING E.P.A. METHOD 600/R-93/116. NON-FRIABLE MATERIALS WERE ANALYZED APPLYING THE SAME METHOD. THE LOWER DETECTION LIMIT IS <1 % WITH THE PROVISIO THAT PLM MAY NOT DETECT FIBERS <0.25 MICRONS IN DIAMETER THAT MAY BE PRESENT IN SAMPLES SUCH AS FLOOR TILES. IN ACCORDANCE WITH TITLE 22, CCR, SECTION 66261.24(a)(2)(A), THE MCL IS 1%. SAMPLES WERE NOT COLLECTED BY ASBESTECH. THIS REPORT MUST NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE APPROVAL OF ASBESTECH. THIS REPORT RELATES ONLY TO THE ITEMS TESTED. THIS REPORT MUST NOT BE USED TO CLAIM PRODUCT ENDORSEMENT BY N.V.L.A.P. OR ANY AGENCY OF THE U.S. GOVERNMENT. ASBESTECH ACCEPTS TECHNICAL RESPONSIBILITY FOR THIS REPORT AND DATE OF ISSUE.







70857

# BULK ASBESTOS MATERIAL *Analysis Request*

**ENTEK CONSULTING GROUP, INC.**  
4200 ROCKLIN ROAD, SUITE 7  
ROCKLIN, CA 95677  
(916) 632-6800 PHONE  
(916) 632-6812 FAX  
[mainoffice@entekgroup.com](mailto:mainoffice@entekgroup.com)

**Date of Sampling:** November 20 & 21, 2023

**Lab:** Asbestech

**Job Number:** 23-6967

**Collected by:** Jose Hernandez

**Client Name:** Sacramento City USD

**Turnaround Time:** Standard Turnaround Time, Monday, 12/4/23, By End of Day

**Site Address:** Alice Birney Public Waldorf TK-8 School  
6251 13<sup>th</sup> Street  
Sacramento, CA 95831

**ANALYSIS REQUESTED:** Asbestos by PLM with Dispersion Staining

**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.

Please e-mail results at [mainoffice@entekgroup.com](mailto:mainoffice@entekgroup.com) and [jhernandez@entekgroup.com](mailto:jhernandez@entekgroup.com) as soon as available and include copy of submittal with those results.

SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-23-6967-01A	4" Blue Vinyl Base Cove with Mastic / Building A, Multi-Use Room, North Wall, East Side
ECG-23-6967-01B	4" Blue Vinyl Base Cove with Mastic / Building A, Multi-Use Room, South Wall, East Side
ECG-23-6967-02A	4" Black Vinyl Base Cove with Mastic / Building A, Stage, North Wall, East Side
ECG-23-6967-02B	4" Black Vinyl Base Cove with Mastic / Building A, Stage, West Wall, South Side
ECG-23-6967-03A	2" x 2" Beige Speckled Ceramic Floor Tile with Grout and Mortar / Building B, Kindergarten 1, Toilet Room, Northwest Side
ECG-23-6967-03B	2" x 2" Beige Speckled Ceramic Floor Tile with Grout and Mortar / Building B, Kindergarten 2, Toilet Room, Northeast Side
ECG-23-6967-04A	Carpet Mastic with White Leveling Compound / Building B, Kindergarten 1, Northeast Side
ECG-23-6967-04B	Carpet Mastic / Building B, Kindergarten 2, Northeast Side
ECG-23-6967-05A	12" x 12" Green Mottled Vinyl Floor Tile with Mastic / Building B, Kindergarten 1, Storage Room, West Side
ECG-23-6967-05B	12" x 12" Green Mottled Vinyl Floor Tile with Mastic / Building B, Kindergarten 2, Storage Room, West Side
ECG-23-6967-06A	Concrete / Building B, Kindergarten 1, Northeast Side
ECG-23-6967-06B	Concrete / Building B, Kindergarten 2, Northeast Side
ECG-23-6967-07A	4" Blue Vinyl Base Cove with Mastic / Building B, Kindergarten 1, North Wall

[https://entekgroupinc.sharepoint.com/sites/Entekgroup/Shared Documents/Clients/Sacramento City USD/23-6967 Alice Birney TK-8 - HazMat/Bulk Asb/Bulk Asb Rqst 11-20-23 and 11-21-23.docx](https://entekgroupinc.sharepoint.com/sites/Entekgroup/Shared%20Documents/Clients/Sacramento%20City%20USD/23-6967%20Alice%20Birney%20TK-8%20-%20HazMat/Bulk%20Asb/Bulk%20Asb%20Rqst%2011-20-23%20and%2011-21-23.docx)

Delivered by: 

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# BULK ASBESTOS MATERIAL *Analysis Request*

**ENTEK CONSULTING GROUP, INC.**  
4200 ROCKLIN ROAD, SUITE 7  
ROCKLIN, CA 95677  
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[mainoffice@entekgroup.com](mailto:mainoffice@entekgroup.com)

**Date of Sampling:** November 20 & 21, 2023

**Lab:** Asbestech

**Job Number:** 23-6967

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Sacramento, CA 95831

**ANALYSIS REQUESTED:** Asbestos by PLM with Dispersion Staining

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SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-23-6967-07B	4" Blue Vinyl Base Cove with Mastic / Building B, Kindergarten 2, North Wall
ECG-23-6967-08A	Drywall with Joint Compound / Building B, Kindergarten 1, Teacher Work Room, Southwest Corner
ECG-23-6967-08B	Drywall with Joint Compound / Building B, Kindergarten 2, Teacher Work Room, Southwest Corner
ECG-23-6967-09A	Orange Peel Texture / Building B, Kindergarten 1, Teacher Work Room, South Wall
ECG-23-6967-09B	Orange Peel Texture / Building B, Kindergarten 2, Teacher Work Room, South Wall
ECG-23-6967-09C	Orange Peel Texture / Building B, Kindergarten 2, Teacher Work Room, Northeast Wall
ECG-23-6967-10A	2" x 2" Beige Speckled Ceramic Floor Tile with Grout and Mortar / Building C, Classroom 3, North Restroom, Southeast Side
ECG-23-6967-10B	2" x 2" Beige Speckled Ceramic Floor Tile with Grout and Mortar / Building C, Classroom 3, South Restroom, North Side
ECG-23-6967-11A	Carpet Mastic / Building C, Classroom 3, South Side
ECG-23-6967-11B	Carpet Mastic / Building C, Classroom 5, Northeast Side
ECG-23-6967-11C	Carpet Mastic / Building C, Classroom 7, West Side
ECG-23-6967-12A	12" x 12" Green Mottled Vinyl Floor Tile with Mastic / Building C, Classroom 3, West Side

<https://entekgroupinc.sharepoint.com/sites/Entekgroup/Shared Documents/Clients/Sacramento City USD/23-6967 Alice Birney TK-8 - HazMat/Bulk Asb/Bulk Asb Rqst 11-20-23 and 11-21-23.docx>

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# BULK ASBESTOS MATERIAL *Analysis Request*

**ENTEK CONSULTING GROUP, INC.**  
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(916) 632-6800 PHONE  
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[mainoffice@entekgroup.com](mailto:mainoffice@entekgroup.com)

**Date of Sampling:** November 20 & 21, 2023

**Lab:** Asbestech

**Job Number:** 23-6967

**Collected by:** Jose Hernandez

**Client Name:** Sacramento City USD

**Turnaround Time:** Standard Turnaround Time, Monday, 12/4/23, By End of Day

**Site Address:** Alice Birney Public Waldorf TK-8 School  
6251 13<sup>th</sup> Street  
Sacramento, CA 95831

**ANALYSIS REQUESTED:** Asbestos by PLM with Dispersion Staining

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SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-23-6967-12B	12" x 12" Green Mottled Vinyl Floor Tile with Mastic / Building C, Classroom 5, Northeast Side
ECG-23-6967-12C	12" x 12" Green Mottled Vinyl Floor Tile with Mastic / Building C, Classroom 7, Northeast Side
ECG-23-6967-13A	Concrete / Building C, Classroom 3, North Side
ECG-23-6967-13B	Concrete / Building C, Classroom 7, East Side
ECG-23-6967-14A	4" Blue Vinyl Base Cove with Mastic / Building C, Classroom 3, Northeast Side
ECG-23-6967-14B	4" Blue Vinyl Base Cove with Mastic / Building C, Classroom 5, South Wall
ECG-23-6967-15A	Drywall with Joint Compound / Building C, Classroom 3, Northeast Corner, Adjacent North Restroom
ECG-23-6967-15B	Drywall with Joint Compound / Building C, Classroom 7, Southwest Corner
ECG-23-6967-16A	Orange Peel Texture / Building C, Classroom 3, North Wall, Adjacent HVAC Closet
ECG-23-6967-16B	Orange Peel Texture / Building C, Classroom 5, West Wall
ECG-23-6967-16C	Orange Peel Texture / Building C, Classroom 7, West Wall
ECG-23-6967-17A	Carpet Mastic / Building D, Classroom 8, North Side
ECG-23-6967-17B	Carpet Mastic / Building D, Classroom 10, Southeast Side

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# BULK ASBESTOS MATERIAL *Analysis Request*

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ROCKLIN, CA 95677  
(916) 632-6800 PHONE  
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[mainoffice@entekgroup.com](mailto:mainoffice@entekgroup.com)

**Date of Sampling:** November 20 & 21, 2023

**Lab:** Asbestech

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**Client Name:** Sacramento City USD

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**Site Address:** Alice Birney Public Waldorf TK-8 School  
6251 13<sup>th</sup> Street  
Sacramento, CA 95831

**ANALYSIS REQUESTED:** Asbestos by PLM with Dispersion Staining

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SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-23-6967-17C	Carpet Mastic / Building D, Classroom 12, South Side
ECG-23-6967-18A	12" x 12" Green Mottled Vinyl Floor Tile with Mastic / Building D, Classroom 8, Northeast Side
ECG-23-6967-18B	12" x 12" Green Mottled Vinyl Floor Tile with Mastic / Building D, Classroom 10, Southwest Side
ECG-23-6967-18C	12" x 12" Green Mottled Vinyl Floor Tile with Mastic / Building D, Classroom 12, Northwest Side
ECG-23-6967-19A	Concrete / Building D, Classroom 8, North Side
ECG-23-6967-19B	Concrete / Building D, Classroom 12, South Side
ECG-23-6967-20A	4" Blue Vinyl Base Cove with Mastic / Building D, Classroom 10, South Wall
ECG-23-6967-20B	4" Blue Vinyl Base Cove with Mastic / Building D, Classroom 12, South Wall
ECG-23-6967-21A	Drywall with Joint Compound / Building D, Classroom 9, Southwest Corner
ECG-23-6967-21B	Drywall with Joint Compound / Building D, Classroom 11, Southwest Corner
ECG-23-6967-22A	Orange Peel Texture / Building D, Classroom 9, West Wall
ECG-23-6967-22B	Orange Peel Texture / Building D, Classroom 10, West Wall
ECG-23-6967-22C	Orange Peel Texture / Building D, Classroom 11, West Wall

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# BULK ASBESTOS MATERIAL *Analysis Request*

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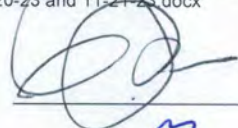
**ANALYSIS REQUESTED:** Asbestos by PLM with Dispersion Staining

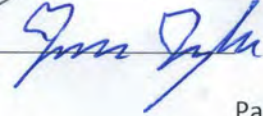
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SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-23-6967-23A	Drywall with Joint Compound / Building E, Girl's Restroom, Northwest Corner
ECG-23-6967-23B	Drywall with Joint Compound / Building E, Boy's Restroom, Northwest Corner
ECG-23-6967-24A	Skim Coat / Building E, Girl's Restroom, West Wall
ECG-23-6967-24B	Skim Coat / Building E, Girl's Restroom, South Wall
ECG-23-6967-24C	Skim Coat / Building E, Boy's Restroom, West Wall
ECG-23-6967-25A	Drywall with Joint Compound / Building F, Girl's Restroom, Northwest Corner
ECG-23-6967-25B	Drywall with Joint Compound / Building F, Boy's Restroom, Southwest Corner
ECG-23-6967-26A	Skim Coat / Building F, Girl's Restroom, West Wall
ECG-23-6967-26B	Skim Coat / Building F, Girl's Restroom, North Wall
ECG-23-6967-26C	Skim Coat / Building F, Boy's Restroom, West Wall
ECG-23-6967-27A	Carpet Mastic (Top Layer) / Building H, Classroom 13, Northeast Side
ECG-23-6967-27B	Carpet Mastic (Top Layer) / Building H, Classroom 14, Northeast Side
ECG-23-6967-28A	Brown Vinyl Floor Tile with Black Mastic (Bottom Layer) / Building H, Classroom 13, Northeast Side, Under Carpet
ECG-23-6967-28B	Brown Vinyl Floor Tile with Black Mastic (Bottom Layer) / Building H, Classroom 14, Northeast Side, Under Carpet

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# BULK ASBESTOS MATERIAL *Analysis Request*

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**ANALYSIS REQUESTED:** Asbestos by PLM with Dispersion Staining

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SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-23-6967-29A	12" x 12" Brown Mottled Vinyl Floor Tile with Black Mastic / Building H, Classroom 13, Northwest Side
ECG-23-6967-29B	12" x 12" Brown Mottled Vinyl Floor Tile with Black Mastic / Building H, Classroom 14, Southwest Side
ECG-23-6967-30A	4" Brown Vinyl Base Cove with Mastic / Building H, Classroom 13, North Wall
ECG-23-6967-30B	4" Brown Vinyl Base Cove with Mastic / Building H, Classroom 14, East Wall
ECG-23-6967-31A	Carpet Mastic / Building H, Classroom 15, Northeast Side
ECG-23-6967-31B	Carpet Mastic with Gray Leveling Compound / Building H, Classroom 15, South Side
ECG-23-6967-32A	12" x 12" Beige Mottled Vinyl Floor Tile with Yellow Mastic / Building H, Classroom 15, Northwest Side
ECG-23-6967-32B	12" x 12" Beige Mottled Vinyl Floor Tile with Yellow Mastic / Building H, Classroom 15, Southwest Side
ECG-23-6967-33A	4" Gray Vinyl Base Cove with Mastic / Building H, Classroom 15, South Wall, West Side
ECG-23-6967-33B	4" Gray Vinyl Base Cove with Mastic / Building H, Classroom 15, North Wall, West Side
ECG-23-6967-34A	Carpet Mastic / Building K, Classroom 16, Northeast Side
ECG-23-6967-34B	Carpet Mastic / Building K, Classroom 18, Southeast Side

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70857

# BULK ASBESTOS MATERIAL *Analysis Request*

**ENTEK CONSULTING GROUP, INC.**  
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SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-23-6967-35A	12" x 12" Gray Mottled Vinyl Floor Tile with Black Mastic / Building K, Classroom 16, Southwest Side
ECG-23-6967-35B	12" x 12" Gray Mottled Vinyl Floor Tile with Black Mastic / Building K, Classroom 18, Northwest Side
ECG-23-6967-36A	4" Gray Vinyl Base Cove with Mastic / Building K, Classroom 16, South Wall, West Side
ECG-23-6967-36B	4" Gray Vinyl Base Cove with Mastic / Building K, Classroom 18, North Wall, West Side
ECG-23-6967-37A	Carpet Mastic with Leveling Compound / Building K, Classroom 17, North Side
ECG-23-6967-37B	Carpet Mastic with Leveling Compound / Building K, Classroom 17, South Side
ECG-23-6967-38A	12" x 12" Light Gray Mottled Vinyl Floor Tile with Black Mastic / Building K, Classroom 17, Northwest Side
ECG-23-6967-38B	12" x 12" Light Gray Mottled Vinyl Floor Tile with Black Mastic / Building K, Classroom 17, Southwest Side
ECG-23-6967-39A	4" Black Vinyl Base Cove with Mastic / Building K, Classroom 17, North Wall
ECG-23-6967-39B	4" Black Vinyl Base Cove with Mastic / Building K, Classroom 17, South Wall
ECG-23-6967-40A	12" x 12" Gray Mottled Vinyl Floor Tile with Yellow Mastic / Building J, Classroom 19, Southeast Side
ECG-23-6967-40B	12" x 12" Gray Mottled Vinyl Floor Tile with Yellow Mastic / Building J, Classroom 19, Southwest Side

<https://entekgroupinc.sharepoint.com/sites/Entekgroup/Shared Documents/Clients/Sacramento City USD/23-6967 Alice Birney TK-8 - HazMat/Bulk Asb/Bulk Asb Rqst 11-20-23 and 11-21-23.docx>

Delivered by: 

Date: 11/21/23 Time: 3:45 AM/PM

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Date: 11/27/23 Time: 3:45 AM/PM





70857

# BULK ASBESTOS MATERIAL *Analysis Request*

**ENTEK CONSULTING GROUP, INC.**  
4200 ROCKLIN ROAD, SUITE 7  
ROCKLIN, CA 95677  
(916) 632-6800 PHONE  
(916) 632-6812 FAX  
[mainoffice@entekgroup.com](mailto:mainoffice@entekgroup.com)

**Date of Sampling:** November 20 & 21, 2023

**Lab:** Asbestech

**Job Number:** 23-6967

**Collected by:** Jose Hernandez

**Client Name:** Sacramento City USD

**Turnaround Time:** Standard Turnaround Time, Monday, 12/4/23, By End of Day

**Site Address:** Alice Birney Public Waldorf TK-8 School  
6251 13<sup>th</sup> Street  
Sacramento, CA 95831

**ANALYSIS REQUESTED:** Asbestos by PLM with Dispersion Staining

**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.

Please e-mail results at [mainoffice@entekgroup.com](mailto:mainoffice@entekgroup.com) and [jhernandez@entekgroup.com](mailto:jhernandez@entekgroup.com) as soon as available and include copy of submittal with those results.

SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-23-6967-41A	12" x 12" Blue Mottled Vinyl Floor Tile with Yellow Mastic / Building J, Classroom 19, Southeast Side
ECG-23-6967-41B	12" x 12" Blue Mottled Vinyl Floor Tile with Yellow Mastic / Building J, Classroom 19, Southwest Side
ECG-23-6967-42A	4" Black Vinyl Base Cove with Mastic / Building J, Classroom 19, South Wall, Adjacent Closet
ECG-23-6967-42B	4" Black Vinyl Base Cove with Mastic / Building J, Classroom 19, East Wall
ECG-23-6967-43A	Drywall with Joint Compound / Building J, Classroom 19, Southeast Corner
ECG-23-6967-43B	Drywall with Joint Compound / Building J, Classroom 19, Southwest Corner
ECG-23-6967-44A	Orange Peel Texture / Building J, Classroom 19, South Wall, Adjacent Closet
ECG-23-6967-44B	Orange Peel Texture / Building J, Classroom 19, North Wall, Adjacent Closet
ECG-23-6967-44C	Orange Peel Texture / Building J, Classroom 19, South Wall
ECG-23-6967-45A	Tan Speckled Sheet Vinyl Flooring with Mastic / Restroom Portable, Girl's Restroom, South Side, At Door
ECG-23-6967-45B	Tan Speckled Sheet Vinyl Flooring with Mastic / Restroom Portable, Boy's Restroom, South Side, At Door
ECG-23-6967-46A	Drywall with Joint Compound / Restroom Portable, Boy's Restroom, Southeast Corner

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[mainoffice@entekgroup.com](mailto:mainoffice@entekgroup.com)

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**Lab:** Asbestech

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SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-23-6967-46B	Drywall with Joint Compound / Restroom Portable, Girl's Restroom, Southeast Corner
ECG-23-6967-47A	Skim Coat / Restroom Portable, Boy's Restroom, South Wall
ECG-23-6967-47B	Skim Coat / Restroom Portable, Boy's Restroom, North Wall
ECG-23-6967-47C	Skim Coat / Restroom Portable, Girl's Restroom, East Wall
ECG-23-6967-48A	Light Brown Wood Pattern Luxury Vinyl Tile with Mastic / Building G, Classroom 21
ECG-23-6967-48B	Light Brown Wood Pattern Luxury Vinyl Tile with Mastic / Building G, Classroom 23
ECG-23-6967-49A	4" Blue Vinyl Base Cove with Mastic / Building G, Classroom 21
ECG-23-6967-49B	4" Blue Vinyl Base Cove with Mastic / Building G, Classroom 23
ECG-23-6967-50A	Drywall with Joint Compound / Building G, Classroom 23
ECG-23-6967-50B	Drywall with Joint Compound / Building G, Classroom 20
ECG-23-6967-51A	Asphalt Rolled Roofing / Roof, Building B, West Side
ECG-23-6967-51B	Asphalt Rolled Roofing / Roof, Building B, East Side
ECG-23-6967-51C	Asphalt Rolled Roofing / Roof, Building C, West Side
ECG-23-6967-51D	Asphalt Rolled Roofing / Roof, Building C, East Side
ECG-23-6967-51E	Asphalt Rolled Roofing / Roof, Building D, West Side

<https://entekgroupinc.sharepoint.com/sites/Entekgroup/Shared Documents/Clients/Sacramento City USD/23-6967 Alice Birney TK-8 - HazMat/Bulk Asb/Bulk Asb Rpt 11-20-23 and 11-21-23.docx>

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Date: 11/22/23 Time: 3:45 AM/PM





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4200 ROCKLIN ROAD, SUITE 7  
ROCKLIN, CA 95677  
(916) 632-6800 PHONE  
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[mainoffice@entekgroup.com](mailto:mainoffice@entekgroup.com)

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**Lab:** Asbestech

**Job Number:** 23-6967

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**Turnaround Time:** Standard Turnaround Time, Monday, 12/4/23, By End of Day

**Site Address:** Alice Birney Public Waldorf TK-8 School  
6251 13<sup>th</sup> Street  
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SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-23-6967-51F	Asphalt Rolled Roofing / Roof, Building D, East Side
ECG-23-6967-52A	Black Penetration Mastic / Roof, Building B, East Side
ECG-23-6967-52B	Black Penetration Mastic / Roof, Building C, South Side
ECG-23-6967-53A	Gray Penetration Mastic / Roof, Building C, East Side
ECG-23-6967-53B	Gray Penetration Mastic / Roof, Building D, North Side
ECG-23-6967-54A	Asphalt Rolled Roofing / Roof, Building H, West Side
ECG-23-6967-54B	Asphalt Rolled Roofing / Roof, Building H, East Side
ECG-23-6967-55A	Silver Coated Penetration Mastic / Roof, Building H, South Side
ECG-23-6967-55B	Silver Coated Penetration Mastic / Roof, Building H, North Side
ECG-23-6967-56A	Asphalt Rolled Roofing with Off-White Coating / Roof, Covered Walkway, North Side
ECG-23-6967-56B	Asphalt Rolled Roofing with Off-White Coating / Roof, Building B, South Side
ECG-23-6967-57A	Asphalt Roof Patch / Roof, Covered Walkway, East of Building D
ECG-23-6967-57B	Asphalt Roof Patch / Roof, Building B, Near Southeast Corner of Building C
ECG-23-6967-58A	White Penetration Mastic / Roof, Covered Walkway, North Side, East of Building D
ECG-23-6967-58B	White Penetration Mastic / Roof, Covered Walkway, North Side

<https://entekgroupinc.sharepoint.com/sites/Entekgroup/Shared Documents/Clients/Sacramento City USD/23-6967 Alice Birney TK-8 - HazMat/Bulk Asb/Bulk Asb Rqst 11-20-23 and 11-21-23.docx>

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[mainoffice@entekgroup.com](mailto:mainoffice@entekgroup.com)

**Date of Sampling:** November 20 & 21, 2023

**Lab:** Asbestech

**Job Number:** 23-6967

**Collected by:** Jose Hernandez

**Client Name:** Sacramento City USD

**Turnaround Time:** Standard Turnaround Time, Monday, 12/4/23, By End of Day

**Site Address:** Alice Birney Public Waldorf TK-8 School  
6251 13<sup>th</sup> Street  
Sacramento, CA 95831

**ANALYSIS REQUESTED:** Asbestos by PLM with Dispersion Staining

**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.

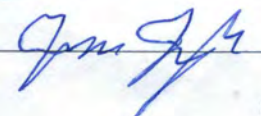
Please e-mail results at [mainoffice@entekgroup.com](mailto:mainoffice@entekgroup.com) and [jhernandez@entekgroup.com](mailto:jhernandez@entekgroup.com) as soon as available and include copy of submittal with those results.

SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-23-6967-59A	Gray Penetration Mastic / Roof, Building C, East Side
ECG-23-6967-59B	Gray Penetration Mastic / Roof, Building D, North Side
ECG-23-6967-60A	Asphalt Rolled Roofing / Roof, Covered Walkway North of Building A
ECG-23-6967-60B	Asphalt Rolled Roofing / Roof, Building A, East Lower Roof
ECG-23-6967-61A	Stucco / Exterior, Building D, East Wall
ECG-23-6967-61B	Stucco / Exterior, Building C, East Wall
ECG-23-6967-61C	Stucco / Exterior, Building B, East Wall
ECG-23-6967-62A	Black Asphalt / Exterior, East Playground, Northeast Side
ECG-23-6967-62B	Black Asphalt / Exterior, East Playground, West Side

<https://entekgroupinc.sharepoint.com/sites/Entekgroup/Shared Documents/Clients/Sacramento City USD/23-6967 Alice Birney TK-8 - HazMat/Bulk Asb/Bulk Asb Rqst 11-20-23 and 11-21-23.docx>

Delivered by: 

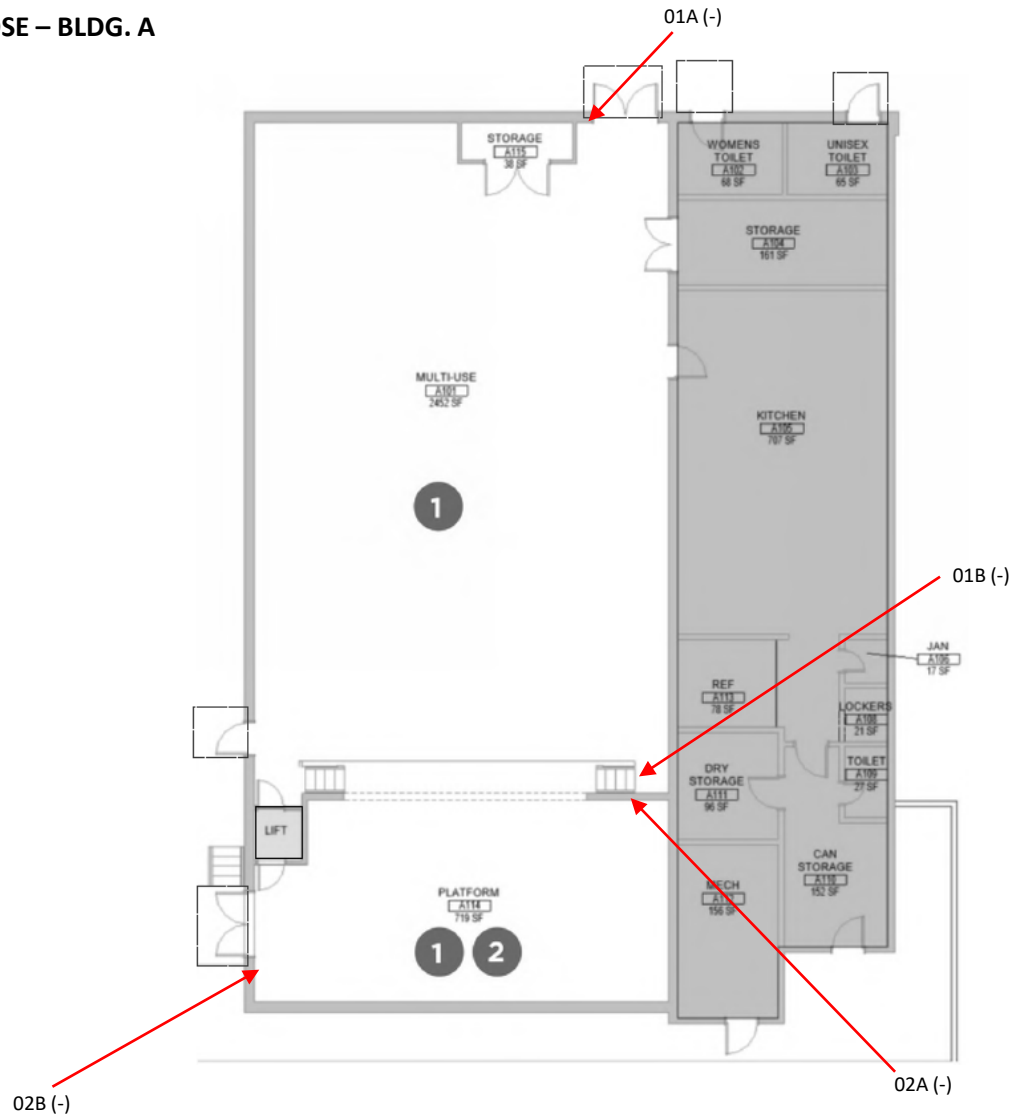
Date: 11/21/23 Time: 3:45 AM/PM

Received by: 

Date: 11/22/23 Time: 3:45 AM/PM



**MULTI-PURPOSE – BLDG. A**



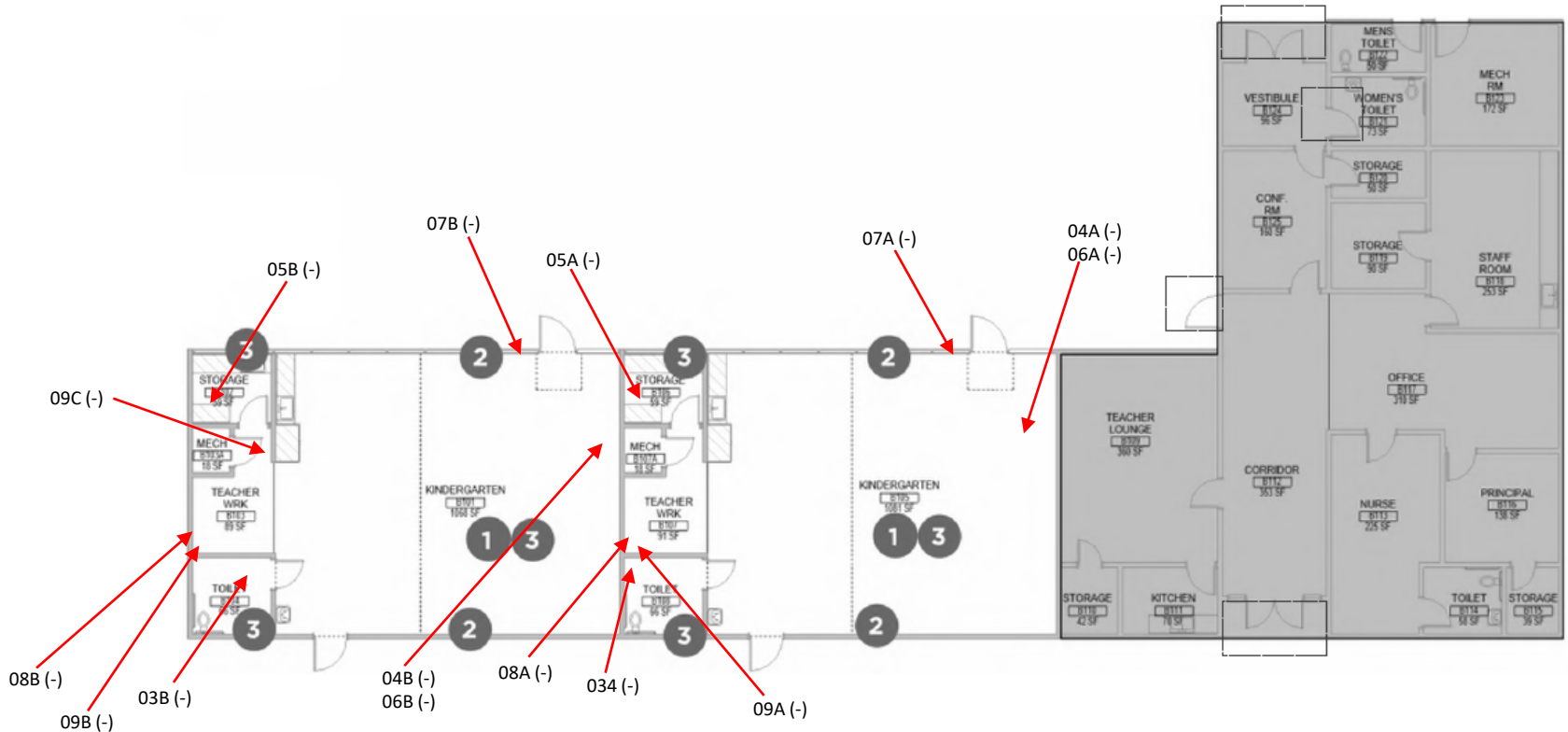
Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
Map Not to Scale

Asbestos Bulk Sample Locations  
Collected by Jose Hernandez  
On November 20 & 21, 2023  
Project Number 23-6967



# ADMINISTRATION & KINDERGARTEN BLDG B



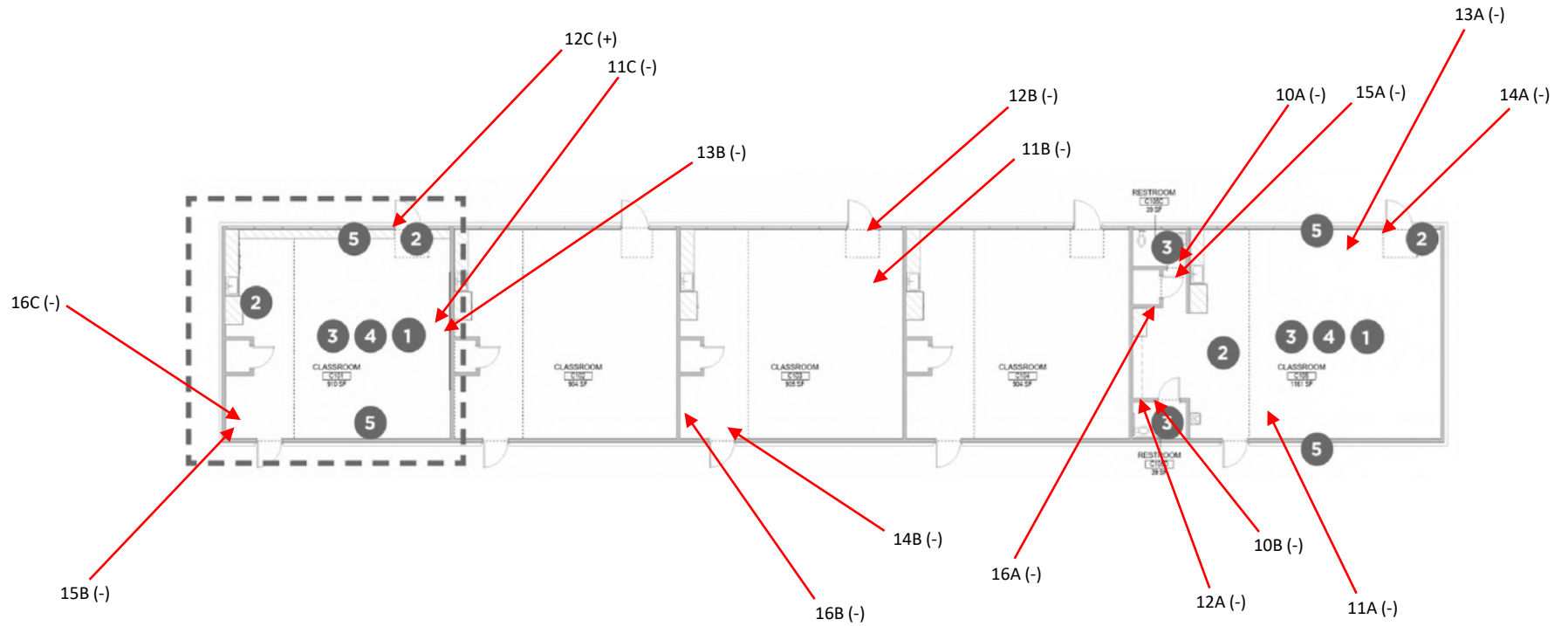
Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
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Map Not to Scale

Asbestos Bulk Sample Locations  
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# CLASSROOM BUILDING C



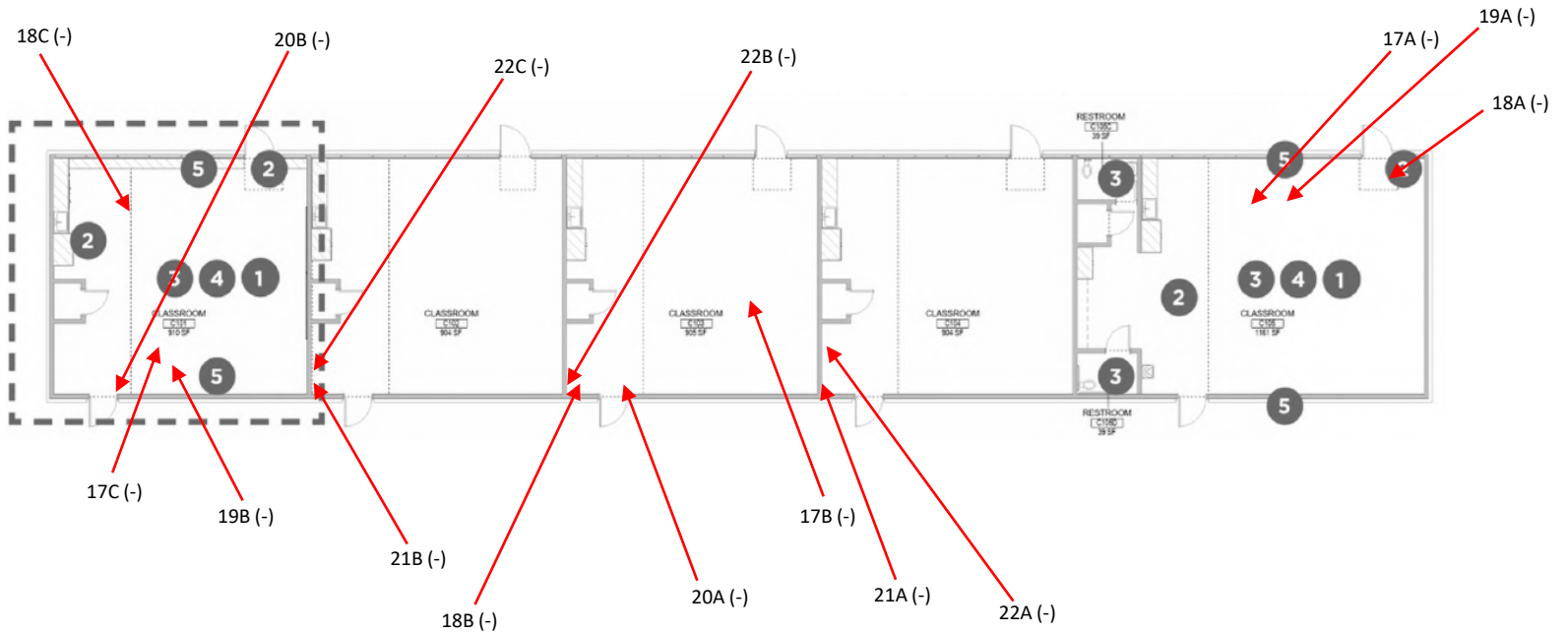
Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
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Map Not to Scale

Asbestos Bulk Sample Locations  
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On November 20 & 21, 2023  
Project Number 23-6967



# CLASSROOM BUILDING D



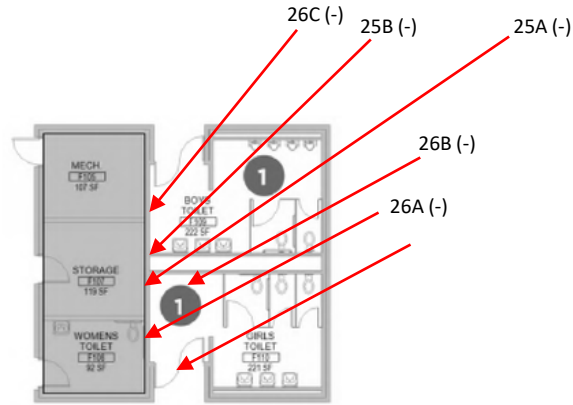
Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
Map Not to Scale

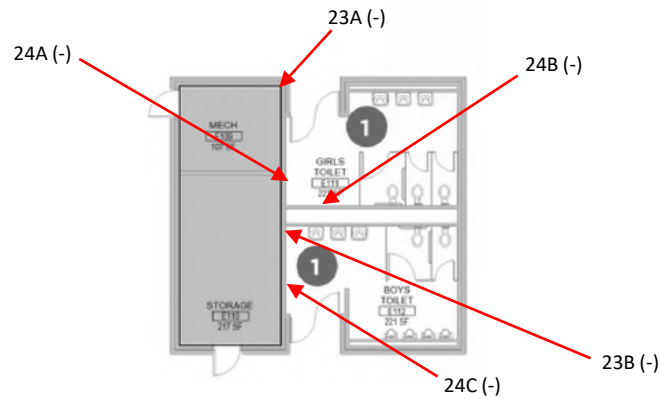
Asbestos Bulk Sample Locations  
Collected by Jose Hernandez  
On November 20 & 21, 2023  
Project Number 23-6967



# CORE RESTROOMS BUILDING E & F



① Building F - Restrooms



② Building E - Restrooms

Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

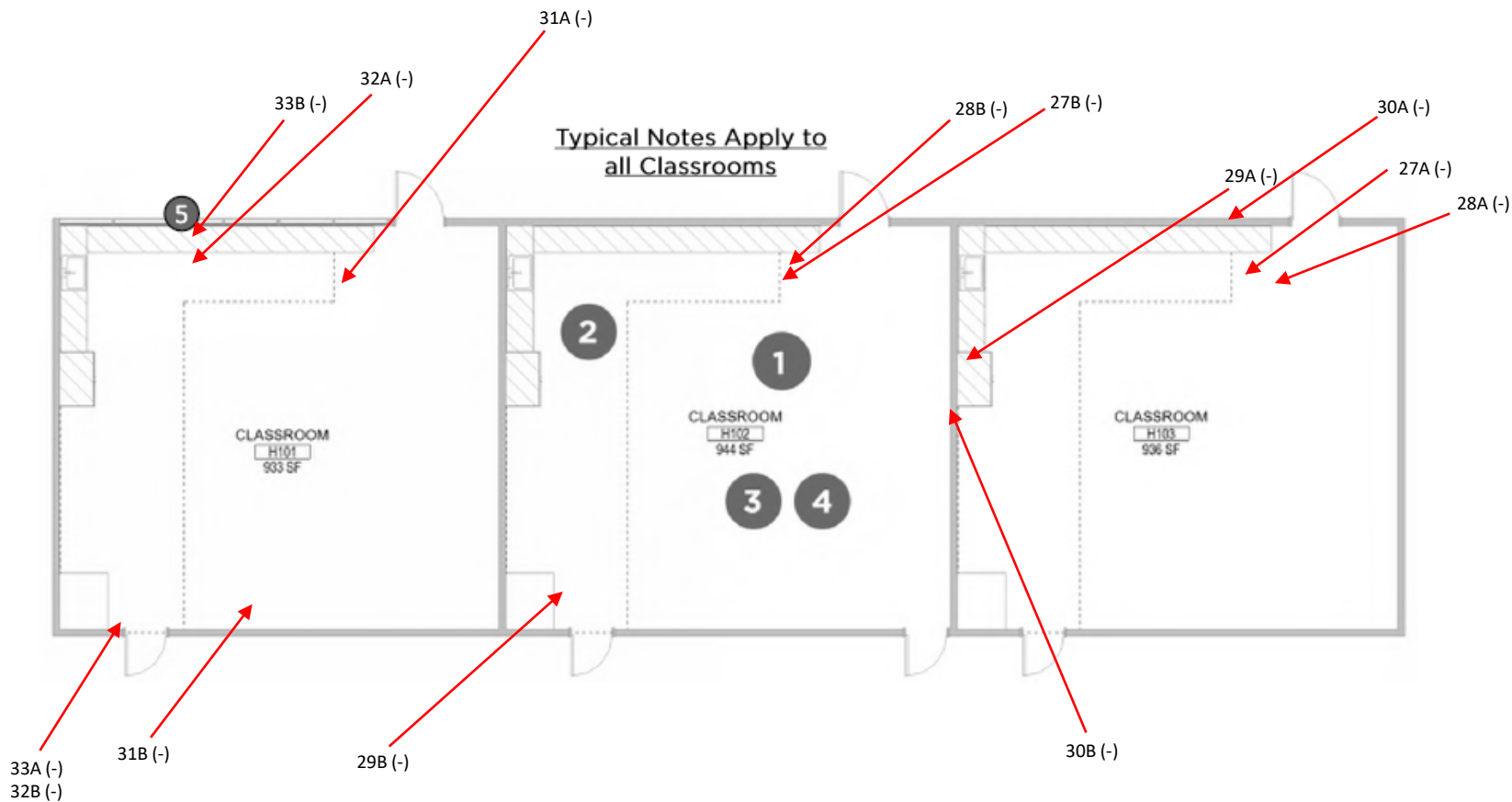
Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
Map Not to Scale

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# CLASSROOMS BUILDING H



Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

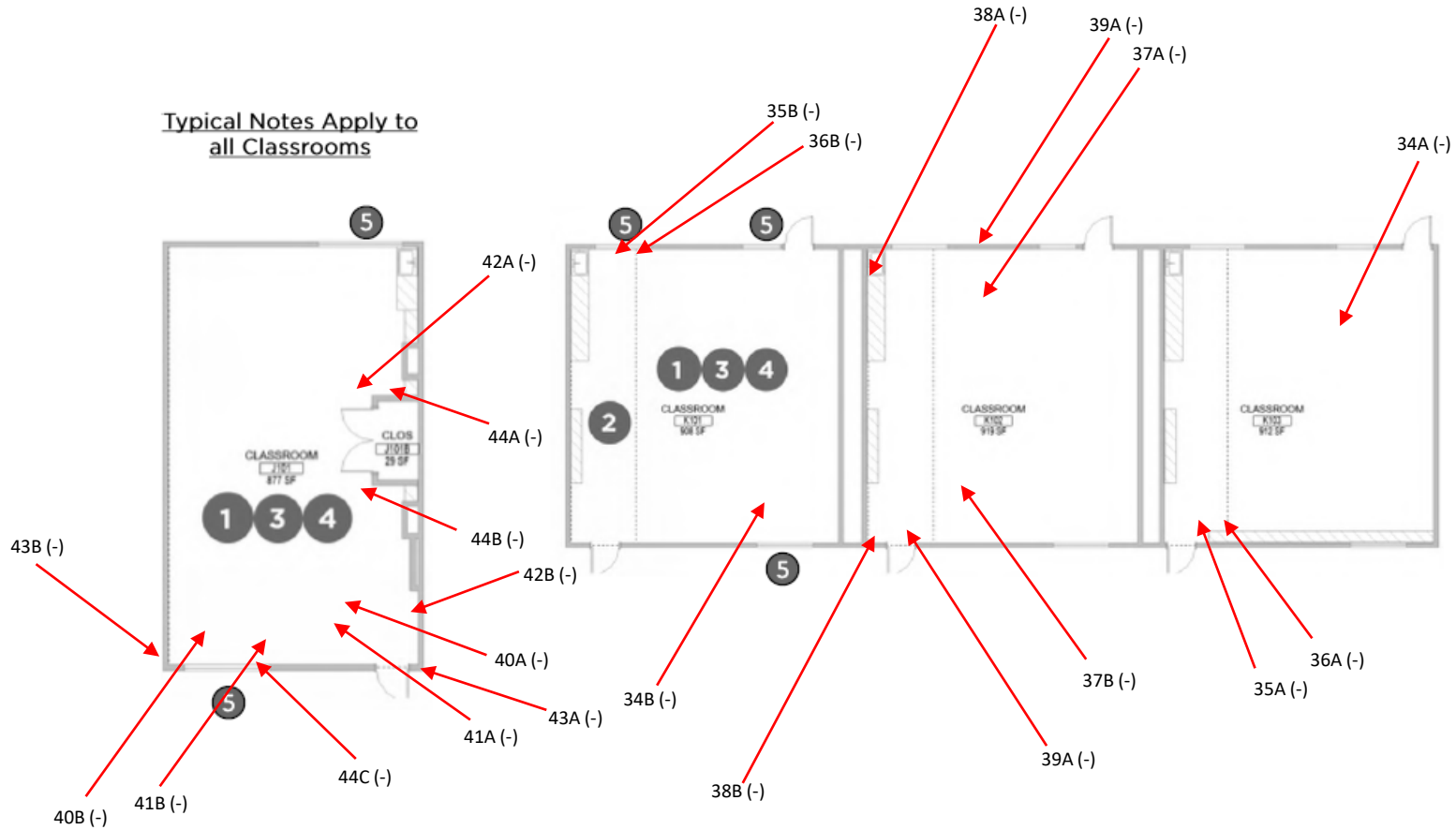
Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
Map Not to Scale

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# CLASSROOM BUILDING J & K

Typical Notes Apply to all Classrooms



Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

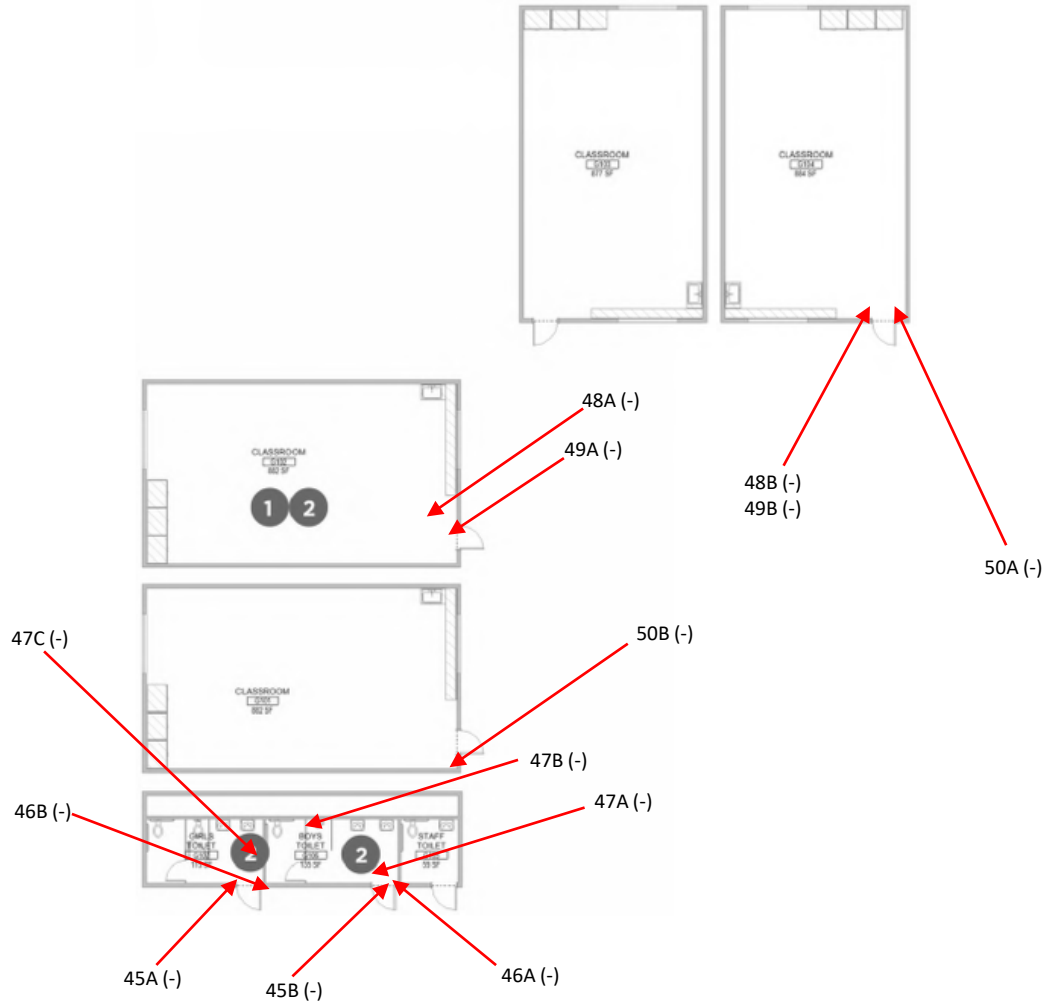
Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
Map Not to Scale

Asbestos Bulk Sample Locations  
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On November 20 & 21, 2023  
Project Number 23-6967





# CLASSROOM & RESTROOM BUILDING G



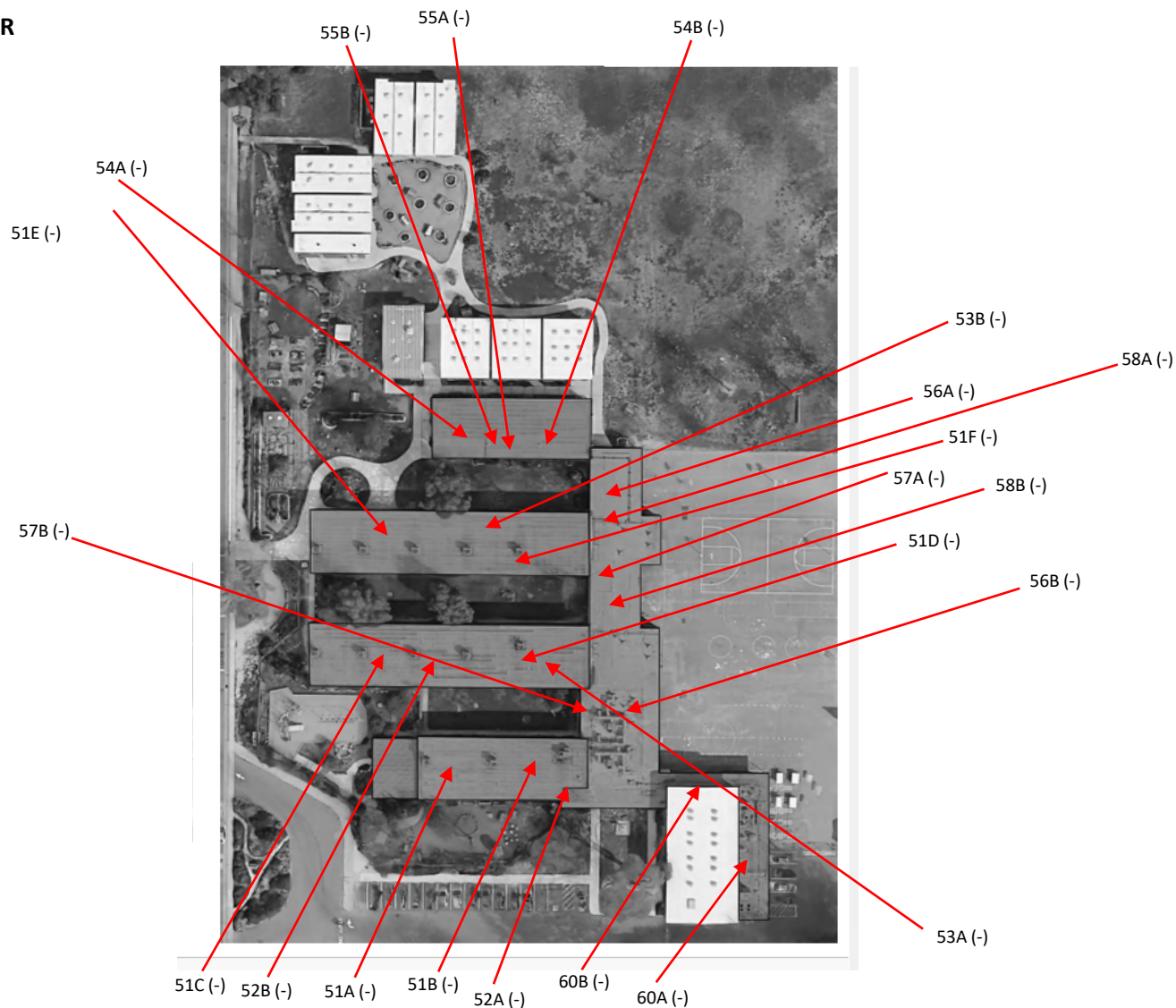
Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
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# ROOFS & EXTERIOR



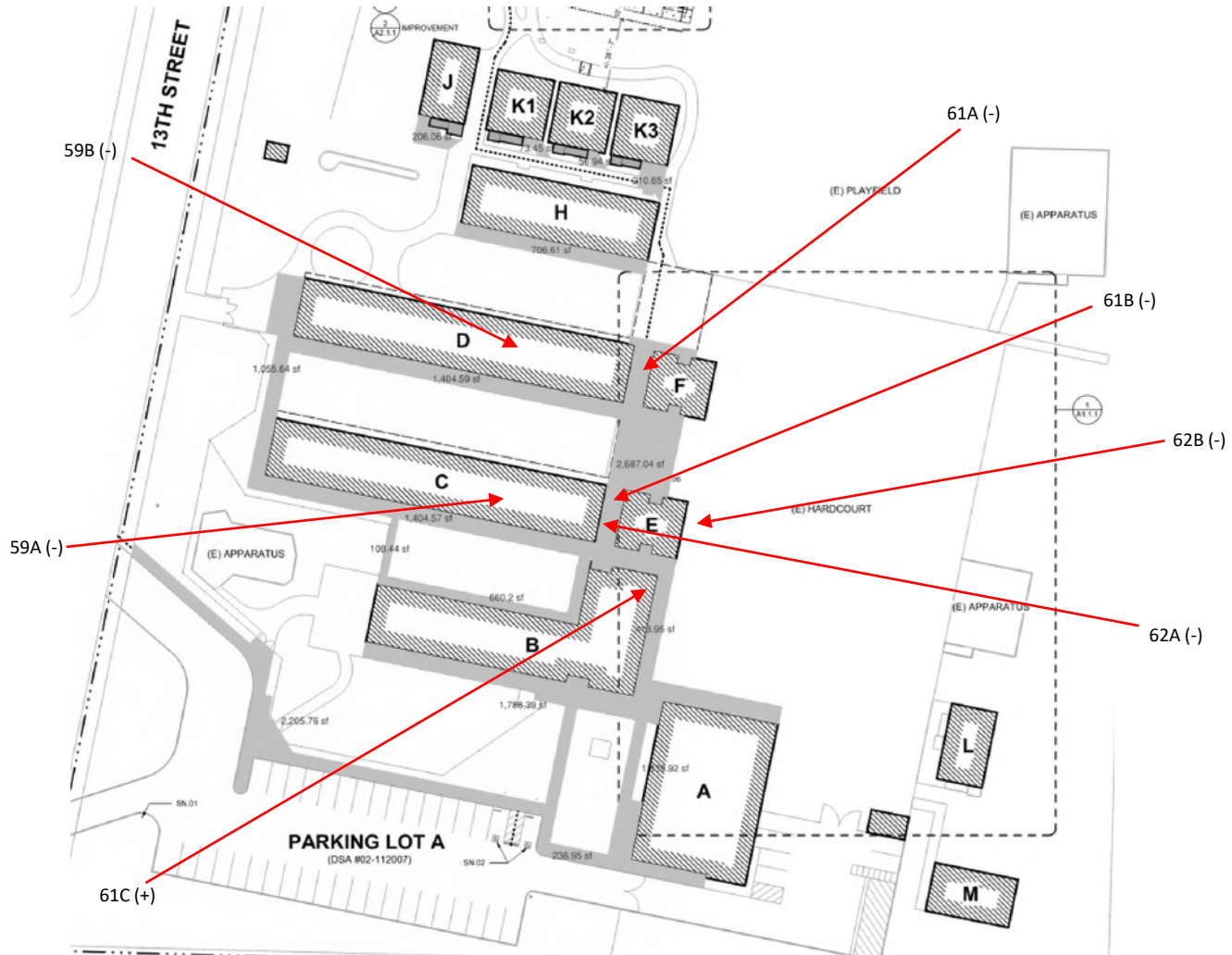
Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

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**ROOFS & EXTERIOR**



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On November 20 & 21, 2023  
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# Asbestos Survey Form

(See Instructions)

777 12<sup>th</sup> Street, 3<sup>rd</sup> Floor  
 Sacramento, CA 95814  
 Office (916) 874-4800  
 Fax (916) 874-4899  
 Email:  
[asbestos@airquality.org](mailto:asbestos@airquality.org)

<b>1. Purpose of Survey</b>		<input type="checkbox"/> Renovation		<input type="checkbox"/> Demolition		
<b>2. Facility Information</b>						
Project Area(s) Description						
Address			City		# of Structures	
<b>3. Owner Information</b>						
Name						
Address			City/State		Zip	
Contact		Phone		Fax	Email	
<b>4. Consultant Information</b>			<b>Survey Date(s):</b>			
Company Name    Entek Consulting Group, Inc.						
Name					DOSH #	
Address 4200 Rocklin Road, Suite 7			City/State Rocklin, California		Zip 95677	
Phone (916) 632-6800		Fax (916) 632-6812		Email	Signature 	
<b>5. Client Information (If different than owner)</b>			<input type="checkbox"/> General Contractor		<input type="checkbox"/> Insurance Company	
<input type="checkbox"/> Architect			<input type="checkbox"/> Property Manager		<input type="checkbox"/> Other _____	
Name						
Address			City/State		Zip    95678	
Contact		Phone		Fax	Email	
<b>6. Have all of the suspect materials that will be disturbed been sampled?</b>					<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
If no, explain why:						
<b>7. Summary of Total Asbestos Containing Material (ACM) Findings</b>						
<b>Regulated Asbestos Containing Material (RACM)</b> <small>(Includes materials subject to known mechanical removal and fire damaged materials)</small>			<b>Category II</b>		<b>Category I</b>	
Square Ft.	Linear Ft.	Cubic Ft.	Square Ft.	Linear Ft.	Square Ft.	Linear Ft.
<b>To receive future SMAQMD Rule updates and changes affecting your industry (check one box):</b>						
<input type="checkbox"/> Please send e-mail notices to			<input type="checkbox"/> I will sign up myself at <a href="http://www.airquality.org/listserve/">www.airquality.org/listserve/</a> to receive emailed notices.			
<input checked="" type="checkbox"/> I am already subscribed.		<input type="checkbox"/> I want the District to mail notices to the address on this application:		<input type="checkbox"/> Owner	<input type="checkbox"/> Consultant	

# Asbestos Renovation/Demolition Notification Form

<b>1</b>	Building Department Permit Application # (if known) : _____	<input type="checkbox"/> Renovation (Do not complete Section 5) <input type="checkbox"/> Demolition (Complete all sections) <input type="checkbox"/> Ordered Demo - Attach ordered demo letter <input type="checkbox"/> Emergency Demo - SMAQMD Emergency #: _____
----------	--	---

<b>2</b>	Contractor	Owner
	Address	Address
	City, State / Zip	City, State / Zip
	Email	Email
	Telephone	Telephone

<b>3</b>	Structure Name	Renovation Area	# of Floors
	Project Address	City / Zip	Year Built

<b>4</b>	Preference for return of form	<input type="checkbox"/> E-mail : _____	<input type="checkbox"/> Other : _____
----------	-------------------------------	---	--

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

<b>5</b>	Start Date _____ / _____ / _____	Revision # 1 2 3 4 5 6 7 8 9 (circle)
	Completion Date _____ / _____ / _____	New Start Date _____ / _____ / _____
		New Completion Date _____ / _____ / _____
Method of Demo (Check Applicable): <input type="checkbox"/> Manual/Hand Tools <input type="checkbox"/> Mechanical/Heavy Equipment <input type="checkbox"/> 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.*

<b>6</b>	Applicant Name (Print)	<input type="checkbox"/> Owner <input type="checkbox"/> Rep / Agent <input type="checkbox"/> 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.**

<b>CONSULTANT USE ONLY</b>	Company Name	Telephone	
	Surveyor Name	DOSH #	Survey Date
	Analytical Method	Pt Count Materials <10%? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Declined by Client	
	Amount of RACM	Square Feet	Linear Feet
	Amount of Category I	Amount of Category II	
	Project Address	City	Zip
	Suspect Materials Present? <input type="checkbox"/> Yes <input type="checkbox"/> No	Consultant's Signature <i>Jan Handley</i>	

**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 Microtest
- Bulk Lead Material Analysis Request Form for Entek
- Lead Bulk Sample Location Drawing
- Lead Hazard Evaluation Report (CDPH 8552)



**MicroTest Laboratories, Inc. | AIHA ELPAT #160934**  
 3110 Gold Canal Dr, Ste. A, Rancho Cordova, CA 95670  
 PH 916.567.9808 | FX 916.404.0302  
 www.microtestlabsinc.com | service@microtestlabsinc.com

\*\*\*for office use only\*\*\*

**Project ID**  
**L33709-24**

**CLIENT INFORMATION**

**Company** Entek Consulting Group, Inc  
**Name** Ryan Metzen  
**Address** 4200 Rocklin Road, Suite 7  
 Rocklin, CA 95677  
**Phone** 916.632.6800  
**Email** mainoffice@entekgroup.com  
 rmetzen@entekgroup.com

**SAMPLE**  
**Dates** Monday, November 20, 2023  
 Tuesday, November 21, 2023

**MicroTest Laboratories**

Analytical Data

**JOB SITE INFORMATION**

**Sampler** Jose Hernandez & Steven Hopper  
**Project** Sacramento City USD  
**Site** Alice Birney Public Waldorf  
 TK-8 School  
**Address** 6251 13th Street  
 Sacramento, CA 95831  
**Job#** 23-6967

**EPA METHOD 7420/700B**

Client	Laboratory	Client	Reporting	Results	Units	Results	Units
Sample ID	Sample ID	Sample Location / Description	Matrix	Results	Units	Limits	Comments
ECG-23-6967-01Pb	L33709	Light Gray Paint over Green Paint on Interior Plaster Wall / Building A, Stage, North Wall, East Side	Paint	0.13%	Wt %	0.01%	1327 PPM
ECG-23-6967-02Pb	L33710	White Paint on Interior Drywall Wall / Building A, Multi-Use Room, South, At Stage Stairs	Paint	<0.01%	Wt %	0.01%	<100 PPM
ECG-23-6967-03Pb	L33711	Pink-White Paint on Interior Drywall / Building B, Kindergarten 1, West Wall	Paint	<0.01%	Wt %	0.01%	<100 PPM
ECG-23-6967-04Pb	L33712	Peach Paint on Interior Drywall Wall / Building B, Kindergarten 2, West Wall	Paint	<0.01%	Wt %	0.01%	<100 PPM
ECG-23-6967-05Pb	L33713	Light Green/White Paint on Interior Drywall Wall / Building D, Classroom 9, West Wall	Paint	<0.01%	Wt %	0.01%	<100 PPM
ECG-23-6967-06Pb	L33714	White Paint on Interior Drywall Wall / Building D, Classroom 8, South Wall, Adjacent HVAC Closet	Paint	<0.01%	Wt %	0.01%	<100 PPM
ECG-23-6967-07Pb	L33715	White Paint on Interior Drywal Wall / Building E, Girl's Restroom, South Wall	Paint	<0.01%	Wt %	0.01%	<100 PPM
ECG-23-6967-08Pb	L33716	White Paint over Orange Paint on Interior Wood Ceiling Deck / Building F, Girl's Restroom, Northwest Side	Paint	1.22%	Wt %	0.01%	12222 PPM
ECG-23-6967-09Pb	L33717	Beige Paint over Gray Paint on Interior Metal Wall Panel / Building F, Girl's Restroom, South Side	Paint	<0.01%	Wt %	0.01%	<100 PPM
ECG-23-6967-10Pb	L33718	White Paint over Beige Paint on Interior Wood Window Trim / Building H, Classroom 14, North Wall	Paint	0.02%	Wt %	0.01%	181 PPM

**Date Received:** Monday, November 27, 2023  
**Date Analyzed:** Tuesday, November 28, 2023  
**Date Reported:** Tuesday, November 28, 2023

Samples Received: 16  
 Samples Analyzed: 16

Analyst: Erich Bowman

Authorized Signatory:   
 Kelly Favero - Lab Manager

This report applies to the standards and procedures indicated and to the specific samples analyzed. Samples have NOT been corrected for blank values. EPA 3050B Hotblock Preparaton Method



**MicroTest Laboratories, Inc. | AIHA ELPAT #160934**  
 3110 Gold Canal Dr, Ste. A, Rancho Cordova, CA 95670  
 PH 916.567.9808 | FX 916.404.0302  
 www.microtestlabsinc.com | service@microtestlabsinc.com

\*\*\*for office use only\*\*\*

**Project ID**  
**L33709-24**

**CLIENT INFORMATION**

**Company** Entek Consulting Group, Inc  
**Name** Ryan Metzen  
**Address** 4200 Rocklin Road, Suite 7  
 Rocklin, CA 95677  
**Phone** 916.632.6800  
**Email** mainoffice@entekgroup.com  
 rmetzen@entekgroup.com

**SAMPLE**  
**Dates** Monday, November 20, 2023  
**Time** Tuesday, November 21, 2023

**MicroTest Laboratories**

Analytical Data

**JOB SITE INFORMATION**

**Sampler** Jose Hernandez & Steven Hopper  
**Project** Sacramento City USD  
**Site** Alice Birney Public Waldorf  
 TK-8 School  
**Address** 6251 13th Street  
 Sacramento, CA 95831  
**Job#** 23-6967

Client	Laboratory	Client	Reporting	Results	Units	Limits	Results	Units
Sample ID	Sample ID	Sample Location / Description	Matrix	Results	Units	Limits	Comments	
ECG-23-6967-11Pb	L33719	Light Gray Paint on Exterior Wood Siding / Building K, Classroom 16, South Wall	Paint	<0.01%	Wt %	0.01%	<100	PPM
ECG-23-6967-12Pb	L33720	Blue Paint over White Paint on Interior Drywall Wall / Building J, Classroom 19, North Wall, Adjacent HVAC Closet	Paint	<0.01%	Wt %	0.01%	<100	PPM
ECG-23-6967-13Pb	L33721	Light Gray Paint on Interior Drywall Wall / Restroom Portable, Girl's Restroom, East Wall	Paint	<0.01%	Wt %	0.01%	<100	PPM
ECG-23-6967-14Pb	L33722	Beige Paint on Interior Drywall Wall / Building G, Classroom 22, West Wall	Paint	<0.01%	Wt %	0.01%	<100	PPM
ECG-23-6967-15Pb	L33723	Brown/Red Paint on Exterior Wood Fascia / Building C, East Side	Paint	0.11%	Wt %	0.01%	1093	PPM
ECG-23-6967-16Pb	L33724	Off-White Paint on Exterior Metal Flashing / Building B, East Side	Paint	0.67%	Wt %	0.01%	6687	PPM

**Date Received:** Monday, November 27, 2023  
**Date Analyzed:** Tuesday, November 28, 2023  
**Date Reported:** Tuesday, November 28, 2023

Samples Received: 16  
 Samples Analyzed: 16

Analyst: Erich Bowman

Authorized Signatory:   
 Kelly Favero - Lab Manager

This report applies to the standards and procedures indicated and to the specific samples analyzed. Samples have NOT been corrected for blank values. EPA 3050B Hotblock Preparaton Method





**BULK LEAD MATERIAL** *Analysis Request*

**Project ID:** L33709-24  
**Client:** Entek  
**Receipt Date:** 11/27/23  
**Count:** 16 **TAT:** 1 Day

**ENTEK CONSULTING GROUP, INC.**  
4200 ROCKLIN ROAD, SUITE 7  
ROCKLIN, CA 95677  
(916) 632-6800 PHONE  
(916) 632-6812 FAX  
[mainoffice@entekgroup.com](mailto:mainoffice@entekgroup.com)

**Date of Sampling:** November 20 & 21, 2023

**Lab:** MicroTest

**Job Number:** 23-6967

**Collected by:** Jose Hernandez & Steven Hopper

**Client Name:** Sacramento City USD

**Turnaround Time:** Standard Turnaround Time

**Site Address:** Alice Birney Public Waldorf TK-8 School  
6251 13<sup>th</sup> Street  
Sacramento, CA 95831

**ANALYSIS REQUESTED:** Lead by Flame Atomic Absorption Spectroscopy

**Special Instructions:** *Please report result in PPM and % by weight. Please email results as soon as possible.*

SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-23-6967-01Pb	Light Gray Paint over Green Paint on Interior Plaster Wall / Building A, Stage, North Wall, East Side
ECG-23-6967-02Pb	White Paint on Interior Drywall Wall / Building A, Multi-Use Room, South, At Stage Stairs
ECG-23-6967-03Pb	Pink-White Paint on Interior Drywall Wall / Building B, Kindergarten 1, West Wall
ECG-23-6967-04Pb	Peach Paint on Interior Drywall Wall / Building B, Kindergarten 2, West Wall
ECG-23-6967-05Pb	Light Green/White Paint on Interior Drywall Wall / Building D, Classroom 9, West Wall
ECG-23-6967-06Pb	White Paint on Interior Drywall Wall / Building D, Classroom 8, South Wall, Adjacent HVAC Closet
ECG-23-6967-07Pb	White Paint on Interior Drywall Wall / Building E, Girl's Restroom, South Wall
ECG-23-6967-08Pb	White Paint over Orange Paint on Interior Wood Ceiling Deck / Building F, Girl's Restroom, Northwest Side
ECG-23-6967-09Pb	Beige Paint over Gray Paint on Interior Metal Wall Panel / Building F, Girl's Restroom, South Side
ECG-23-6967-10Pb	White Paint over Beige Paint on Interior Wood Window Trim / Building H, Classroom 14, North Wall
ECG-23-6967-11Pb	Light Gray Paint on Exterior Wood Siding / Building K, Classroom 16, South Wall
ECG-23-6967-12Pb	Blue Paint over White Paint on Interior Drywall Wall / Building J, Classroom 19, North Wall, Adjacent HVAC Closet
ECG-23-6967-13Pb	Light Gray Paint on Interior Drywall Wall / Restroom Portable, Girl's Restroom, East Wall

<https://entekgroupinc.sharepoint.com/sites/Entekgroup/Shared Documents/Clients/Sacramento City USD/23-6967 Alice Birney TK-8 - HazMat/Bulk Pb/Bulk Pb Rqst 11-20-23 and 11-21-23.docx>

Delivered by:

Date:

11/21/23

Time:

3:55 AM/PM

Received by:

Date:

11/27/23

Time:

3:57 AM/PM



**BULK LEAD MATERIAL** *Analysis Request*

**Project ID:** L33709-24  
**Client:** Entek  
**Receipt Date:** 11/27/23  
**Count:** 16 **TAT:** 1 Day

**ENTEK CONSULTING GROUP, INC.**  
4200 ROCKLIN ROAD, SUITE 7  
ROCKLIN, CA 95677  
(916) 632-6800 PHONE  
(916) 632-6812 FAX  
[mainoffice@entekgroup.com](mailto:mainoffice@entekgroup.com)

**Date of Sampling:** November 20 & 21, 2023

**Lab:** MicroTest

**Job Number:** 23-6967

**Collected by:** Jose Hernandez & Steven Hopper

**Client Name:** Sacramento City USD

**Turnaround Time:** Standard Turnaround Time

**Site Address:** Alice Birney Public Waldorf TK-8 School  
6251 13<sup>th</sup> Street  
Sacramento, CA 95831

**ANALYSIS REQUESTED:** Lead by Flame Atomic Absorption Spectroscopy

**Special Instructions:** *Please report result in PPM and % by weight. Please email results as soon as possible.*

SAMPLE #	MATERIAL DESCRIPTION/LOCATION
ECG-23-6967-14Pb	Beige Paint on Interior Drywall Wall / Building G, Classroom 22, West Wall
ECG-23-6967-15Pb	Brown/Red Paint on Exterior Wood Fascia / Building C, East Side
ECG-23-6967-16Pb	Off-White Paint on Exterior Metal Flashing / Building B, East Side

<https://entekgroupinc.sharepoint.com/sites/Entekgroup/Shared Documents/Clients/Sacramento City USD/23-6967 Alice Birney TK-8 - HazMat/Bulk Pb/Bulk Pb Rqst 11-20-23 and 11-21-23.docx>

Delivered by: 

Date: 11/27/23

Time: 3:55 AM/PM

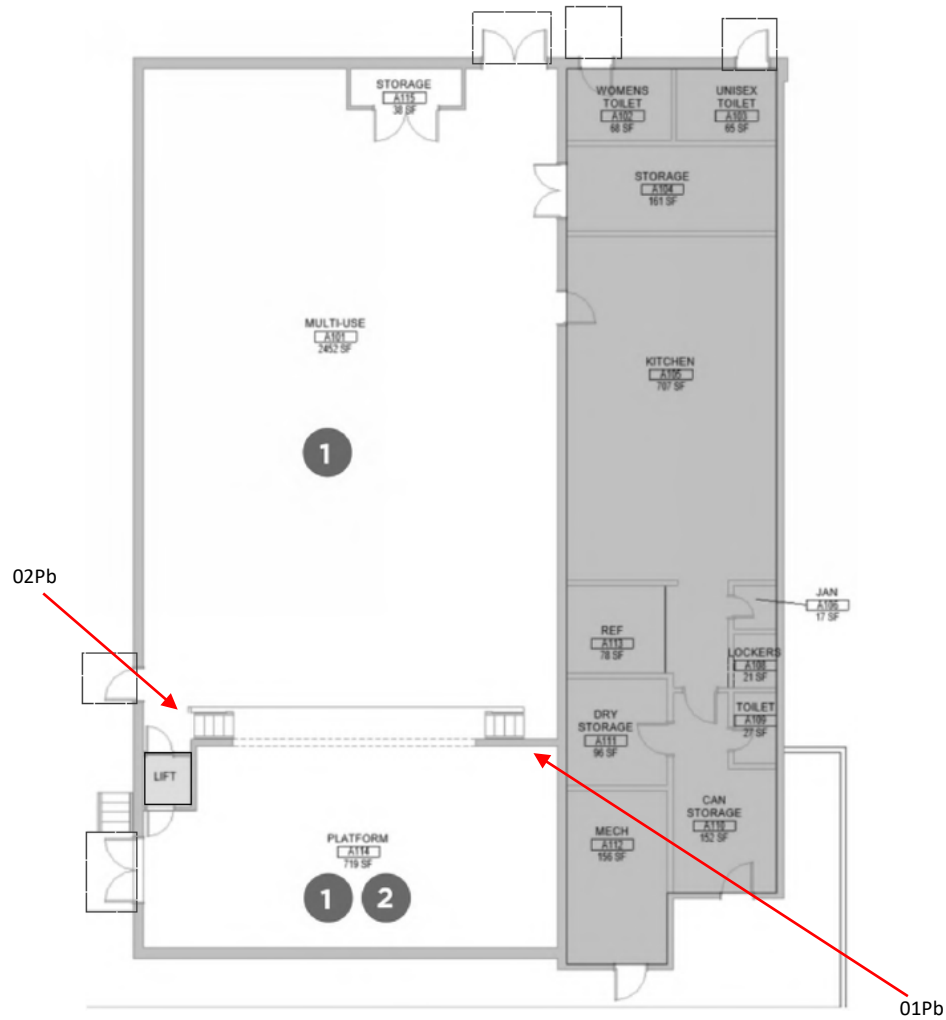
Received by: \_\_\_\_\_

Date: \_\_\_/\_\_\_/\_\_\_

Time: \_\_\_\_\_ AM/PM



MULTI-PURPOSE – BLDG. A



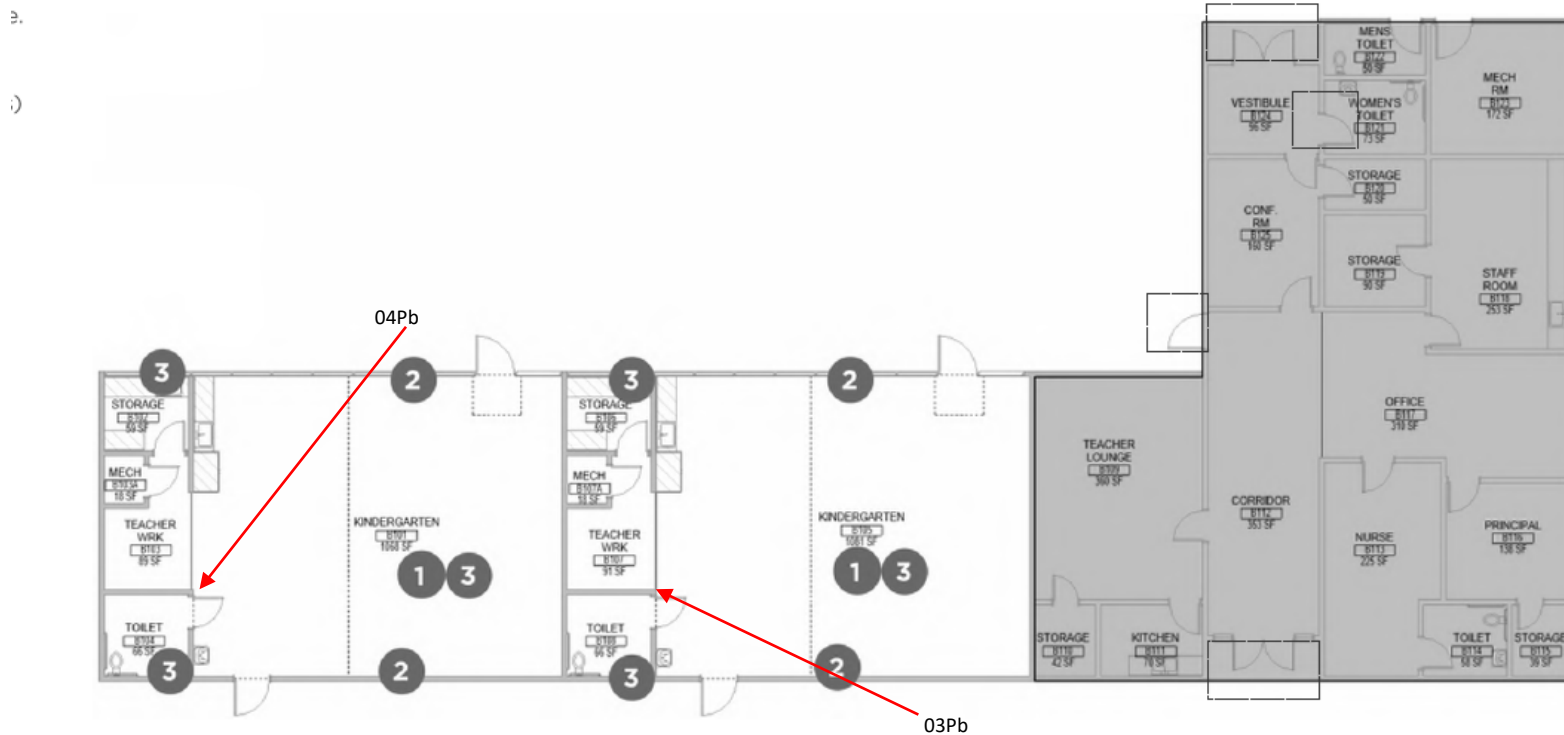
Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
Map Not to Scale

Lead Bulk Sample Locations  
Collected by Jose Hernandez & Steven Hopper  
On November 20 & 21, 2023  
Project Number 23-6967



# ADMINISTRATION & KINDERGARTEN BLDG B



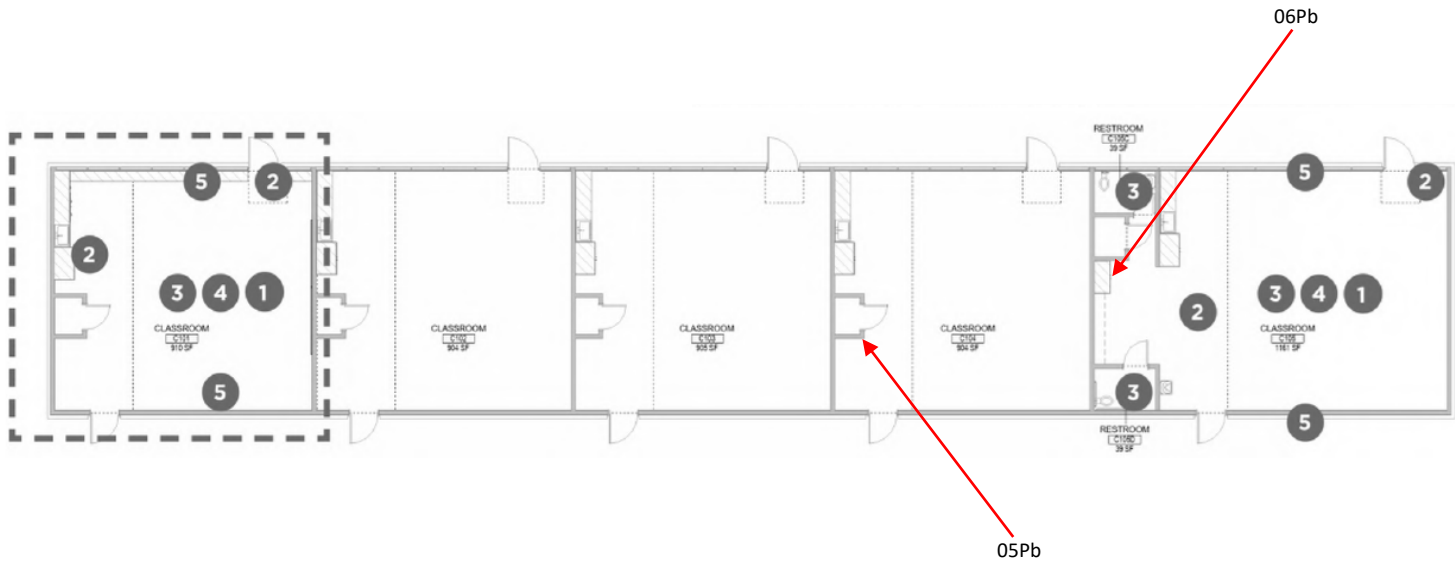
Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
Map Not to Scale

Lead Bulk Sample Locations  
Collected by Jose Hernandez & Steven Hopper  
On November 20 & 21, 2023  
Project Number 23-6967



**CLASSROOM BUILDING D**



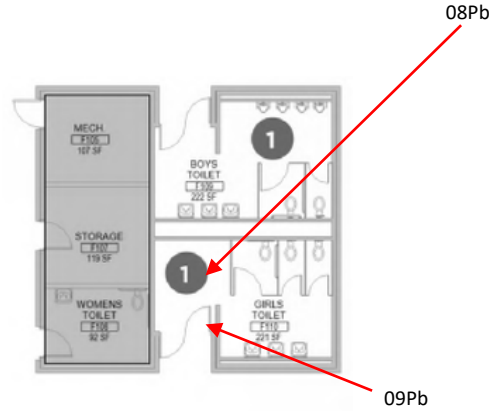
Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
Map Not to Scale

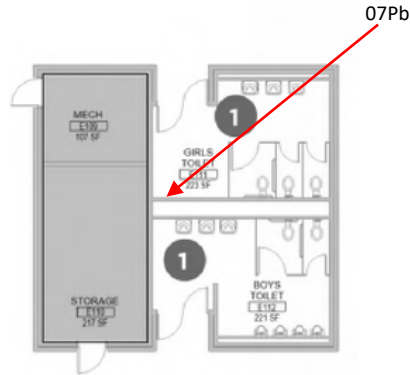
Lead Bulk Sample Locations  
Collected by Jose Hernandez & Steven Hopper  
On November 20 & 21, 2023  
Project Number 23-6967



# CORE RESTROOMS BUILDING E & F



① Building F - Restrooms



② Building E - Restrooms

Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

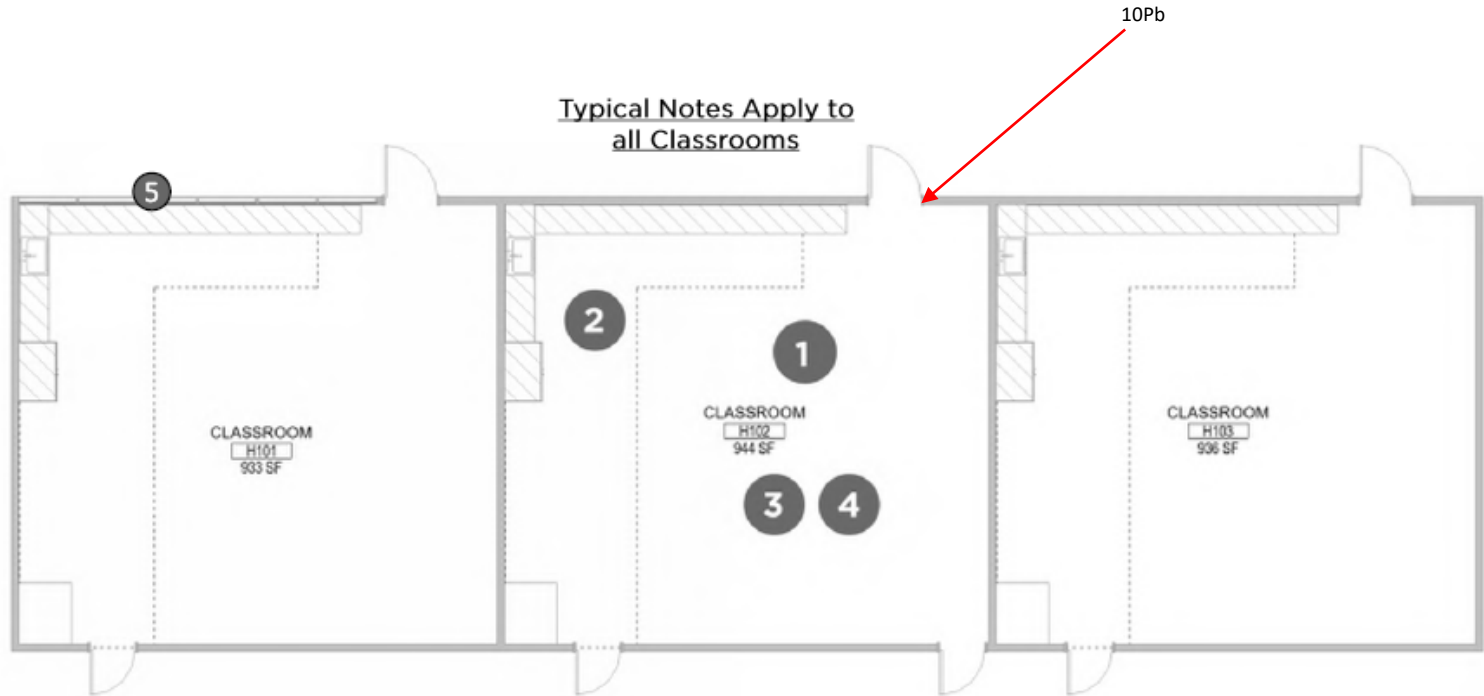
Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
Map Not to Scale

Lead Bulk Sample Locations  
Collected by Jose Hernandez & Steven Hopper  
On November 20 & 21, 2023  
Project Number 23-6967





**CLASSROOMS BUILDING H**



Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
Map Not to Scale

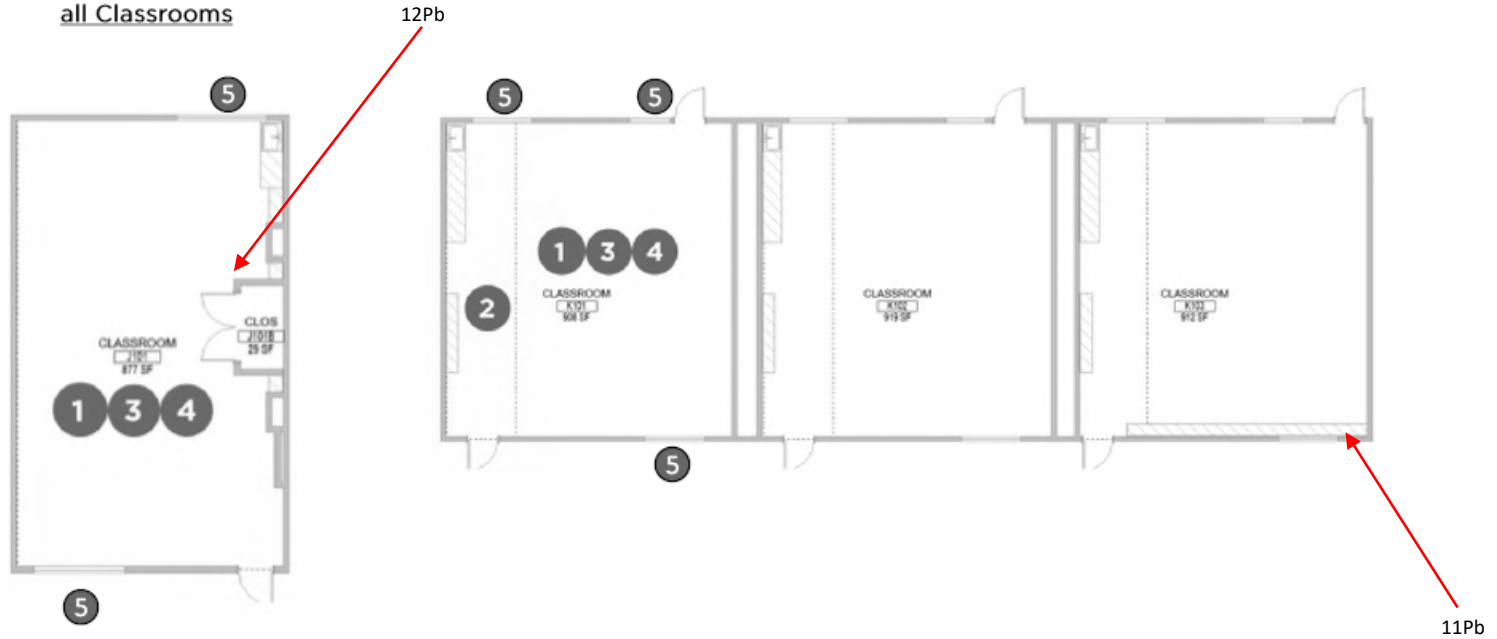
Lead Bulk Sample Locations  
Collected by Jose Hernandez & Steven Hopper  
On November 20 & 21, 2023  
Project Number 23-6967





# CLASSROOM BUILDING J & K

Typical Notes Apply to  
all Classrooms



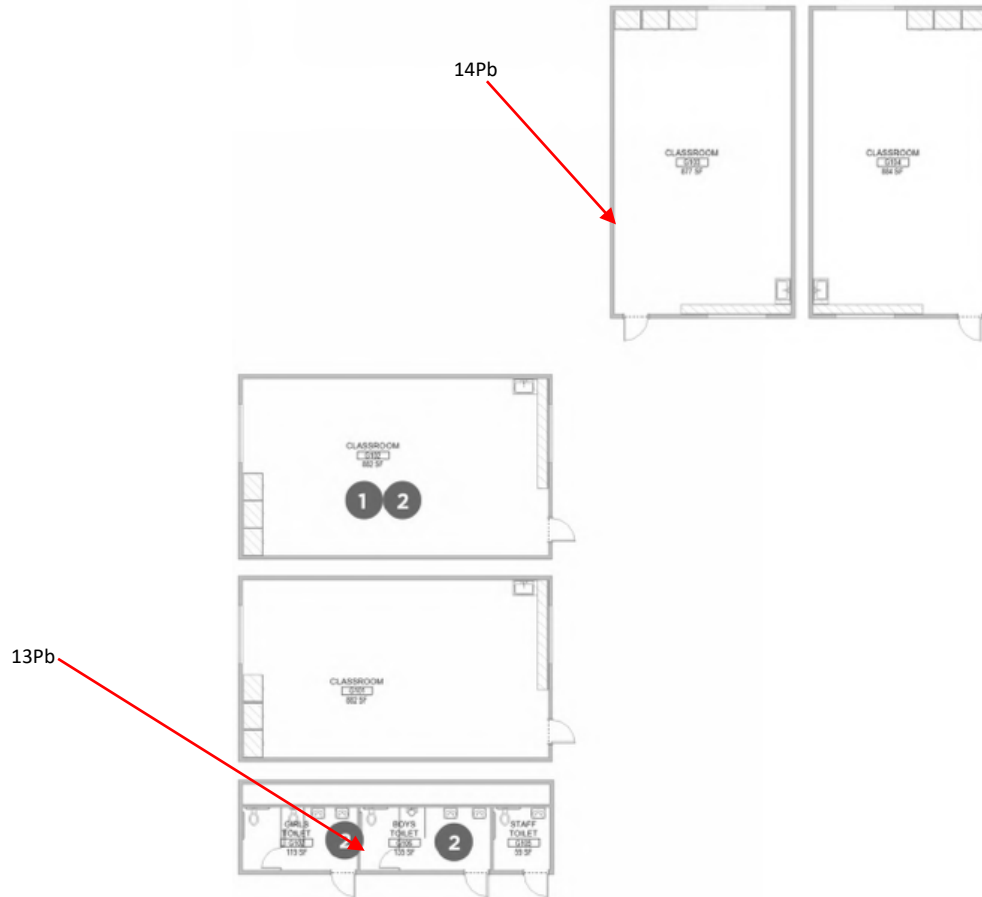
Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
Map Not to Scale

Lead Bulk Sample Locations  
Collected by Jose Hernandez & Steven Hopper  
On November 20 & 21, 2023  
Project Number 23-6967



# CLASSROOM & RESTROOM BUILDING G



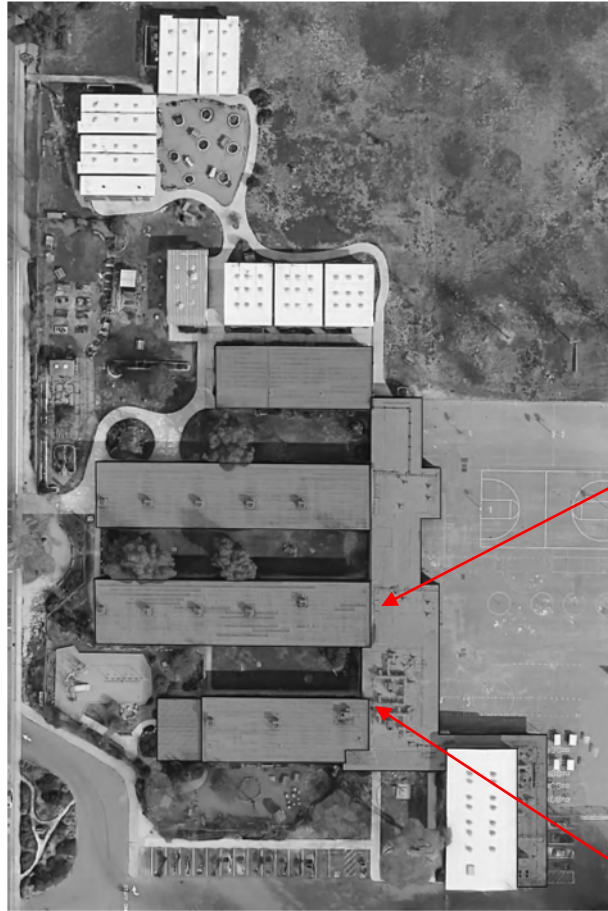
Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
Map Not to Scale

Lead Bulk Sample Locations  
Collected by Jose Hernandez & Steven Hopper  
On November 20 & 21, 2023  
Project Number 23-6967



ROOFS & EXTERIORS



15Pb

16Pb

Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
Map Not to Scale

Lead Bulk Sample Locations  
Collected by Jose Hernandez & Steven Hopper  
On November 20 & 21, 2023  
Project Number 23-6967

## LEAD HAZARD EVALUATION REPORT

**Section 1 — Date of Lead Hazard Evaluation** \_\_\_\_\_

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

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
Construction date (year) of structure	Type of structure <input type="checkbox"/> Multi-unit building <input type="checkbox"/> School or daycare <input type="checkbox"/> Single family dwelling <input type="checkbox"/> Other _____		Children living in structure? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know	


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

Name		Telephone number		
Address [number, street, apartment (if applicable)]		City	State	Zip Code

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

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   
  Other \_\_\_\_\_

**Section 6 — Individual Conducting Lead Hazard Evaluation**

Name		Telephone number		
Address [number, street, apartment (if applicable)]		City	State	Zip Code
CDPH certification number	Signature 		Date	

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

**Section 7 — Attachments**

- A. A foundation diagram or sketch of the structure indicating the specific 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
- Photo Log
- Inspector Accreditations and Certifications
- Laboratory Accreditations for Asbestos and Lead Analysis



Sacramento City Unified School District  
Alice Birney TK-8  
6251 13th Street  
Sacramento, CA 95831

Entek Consulting Group, Inc.  
4200 Rocklin Road, Suite 7  
Rocklin, CA 95677  
Map Not to Scale

Site Map  
Project Number 23-6967



# Photo Log

Job Number:	23-6967	Date:	November 20 & 21, 2023
Client:	Sacramento City Unified School District		
Site Address:	Alice Birney TK-8 Public Waldorf School – 6251 13 <sup>th</sup> Street, Sacramento, CA		



Exterior view of the Alice Birney school.



Interior view of the Multipurpose building.



Interior view of the Kindergarten building.



Interior view of one of the classrooms inside the classroom buildings.



# Photo Log

Job Number:	23-6967	Date:	November 20 & 21, 2023
Client:	Sacramento City Unified School District		
Site Address:	Alice Birney TK-8 Public Waldorf School – 6251 13 <sup>th</sup> Street, Sacramento, CA		



Example of the White paint over Orange paint on the ceilings of Buildings E & F. The paints are lead-based paints.



Example of the roofing systems of the school buildings.



Example of the metal flashing at the transition between the roof and stucco. Asbestos containing black mastic was found between the flashing and stucco.

State of California  
Division of Occupational Safety and Health  
**Certified Asbestos Consultant**

**Jose A Hernandez**

Name



Certification No. 22-6995

Expires on 01/21/24

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:**



**Jose Hernandez**

**CERTIFICATE TYPE:**

Lead Inspector/Assessor

Lead Sampling Technician

**NUMBER:**

LRC-00010754

LRC-00003446

**EXPIRATION DATE:**

1/9/2024

10/27/2023

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](http://www.cdph.ca.gov/programs/clppb) or calling (800) 597-LEAD

# LEAD-RELATED CONSTRUCTION CERTIFICATE

INDIVIDUAL:



**Steven Hopper**

CERTIFICATE TYPE:

Lead Sampling Technician

NUMBER:

LRC-00011201

EXPIRATION DATE:

5/5/2024

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](http://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: 101442-0

**ASBESTECH**  
Rancho Cordova, 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 dated January 2009).*

---

2023-07-01 through 2024-06-30

*Effective Dates*



---

*For the National Voluntary Laboratory Accreditation Program*

A handwritten signature in black ink, appearing to read 'David S. Lerman', positioned above the signature line.

**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017**

**ASBESTECH**

11151 Sun Center Drive, Suite B

Rancho Cordova, CA 95670

Mr. Tommy Conlon

Phone: 916-481-8902 Fax: 916-481-3975

Email: [asbestech@sbcglobal.net](mailto:asbestech@sbcglobal.net)

<http://www.asbestechlab.com>

**ASBESTOS FIBER ANALYSIS**

**NVLAP LAB CODE 101442-0**

**Bulk Asbestos Analysis**

Code

18/A03

Description

EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

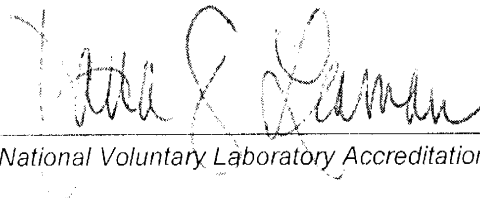
**Airborne Asbestos Analysis**

Code

18/A02

Description

U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.



For the National Voluntary Laboratory Accreditation Program



STATE WATER RESOURCES CONTROL BOARD  
REGIONAL WATER QUALITY CONTROL BOARDS



CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

**CERTIFICATE OF  
ENVIRONMENTAL LABORATORY ACCREDITATION**

Is hereby granted to

**MicroTest Laboratories, Inc.**

3110 Gold Canal Drive

Rancho Cordova, CA 95670

Scope of the certificate is limited to the  
"Fields of Accreditation"  
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations,  
proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of  
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2974**

Effective Date: **7/1/2022**

Expiration Date: **6/30/2024**

A handwritten signature in blue ink, appearing to read "Christine Sotelo".

Sacramento, California  
subject to forfeiture or revocation

Christine Sotelo, Program Manager  
Environmental Laboratory Accreditation Program





**CALIFORNIA STATE  
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM  
Fields of Accreditation**



**MicroTest Laboratories, Inc.**

3110 Gold Canal Drive  
Rancho Cordova, CA 95670  
Phone: 9165679808

**Certificate Number: 2974  
Expiration Date: 6/30/2024**

**Field of Accreditation:114 - Inorganic Constituents in Hazardous Waste**

114.345 002	Antimony	EPA 6020 B
114.345 003	Arsenic	EPA 6020 B
114.345 004	Barium	EPA 6020 B
114.345 005	Beryllium	EPA 6020 B
114.345 006	Cadmium	EPA 6020 B
114.345 008	Chromium	EPA 6020 B
114.345 009	Cobalt	EPA 6020 B
114.345 010	Copper	EPA 6020 B
114.345 012	Lead	EPA 6020 B
114.345 016	Nickel	EPA 6020 B
114.345 018	Selenium	EPA 6020 B
114.345 021	Thallium	EPA 6020 B
114.345 023	Zinc	EPA 6020 B
114.345 024	Molybdenum	EPA 6020 B
114.515 001	Lead	EPA 7420
114.545 001	Mercury	EPA 7471 B

**Field of Accreditation:115 - Leaching/Extraction Tests and Physical Characteristics of Hazardous Waste**

115.055 001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
115.085 001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311

**Field of Accreditation:121 - Bulk Asbestos Analysis of Hazardous Waste**

121.010 001	Bulk Asbestos	EPA 600/M4-82-020
-------------	---------------	-------------------

**ASBESTOS REQUIREMENTS  
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**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.





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 than 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 than 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 is 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.

<u>Respirator Selection</u>	<u>Protection Factor</u>
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



Respirator Selection

Protection Factor

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 be 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 each separate entry 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-vacuuuming 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 collect 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 to 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 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.

**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 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 - Boiler Unit Removal Requirements**

Not Applicable

**Part 23.8 - 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 23.9 - 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**

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

Under some circumstances, asbestos-containing materials may remain in or on a building during the building's demolition. This section describes the work practices and requirements for the demolition of a building with asbestos-containing materials remaining in place in or on the structure.

All friable, Category II non-friable materials, and all Category I non-friable materials that are expected to become friable during the demolition must be removed prior to the start of the demolition process. For example, surfacing materials, thermal system insulation, vinyl sheet flooring and associated backings, vinyl

floor tiles and asbestos cement products must be removed from a building prior to its demolition. Should there be any question as to whether or not a material may remain in or on the building during the demolition, the Contractor shall ask for an opinion in writing from the Owner's CAC. The determination of whether or not a material may remain in a building during the demolition is left solely to the determination of the Owner's CAC.

The only asbestos-containing materials that may remain in or on a building during the building demolition include non-friable materials that the local Air Quality Management District or US EPA has determined may remain in or on the building during the demolition. Approval of this method is determined by the US EPA with the California Air Resources Board having jurisdiction. In general, this will be limited to Category I non-friable materials such as roofing, cove base mastic, paint, and other adhesives. Drywall systems that have a 400 Point Count testing to demonstrate material is ,1% are also materials the EPA allows to be left in place. In order to be considered for being left in or on the building during demolition, there must be a reasonable assumption that these materials will remain non-friable during the demolition.

The black floor mastic containing greater than 1% asbestos on the concrete may be left in place and demolished with the rest of the building as a non-hazardous asbestos waste, as long as, the materials do not become friable. The US EPA NESHAP has determined if this type of flooring mastic becomes friable during the course of the demolition, then it would be considered RACM. Removal of the concrete sections of floor containing the floor mastic using an excavator would not be considered a mechanical action that renders the floor mastic friable. Running over the concrete floor covered with the mastic using an excavator or other heavy equipment with metal tracks will render the concrete and mastic friable and shall not be allowed. The contractor can use an excavator or other heavy equipment with rubber tires on the concrete and is generally not considered to render the mastic friable. If a contractor uses a heavy equipment with metal track on this project, it will not be allowed to go onto the concrete floor that has black mastic, whether the concrete is covered with carpeting, linoleum, vinyl flooring, or other materials. All work will stop at the direction of the CAC if the contractor uses mechanical means that renders the asbestos containing materials left in place friable.

Should the building and materials meet the criteria listed above, the building may be demolished without the prior removal of those materials. However, if previously unidentified materials are discovered during the demolition process, the Contractor must stop demolition and notify the Owner's CAC of the existence of the new material. Under no circumstances may the Contractor continue to disturb the new material until the new material has been properly investigated and the Contractor given permission to proceed by the Owner's CAC.

The demolition of any building on this project with ACM, ACBM, or ACCM remaining in place must be conducted by a California licensed asbestos contractor with current and valid registration with the California Division of Occupational Safety and Health Asbestos Contractors' Registration Unit.

The Federal Occupational Safety and Health Administration (OSHA) has defined the demolition of buildings that contain Class II materials (non-friable materials) to be Class II work. Therefore the training, work practices, and procedures of Class II work must be followed. The following requirements summarize the requirements for Class II work as listed in the Asbestos Standard for the Construction Industry (Title 8 CCR 1529) for work such as demolition where specific controls have not been listed in the standard.

The supervisor must meet the training requirements for a "competent" person for Class II work as listed in Title 8 CCR 1529 (o)(4)(A). In summary, the supervisor must be an accredited supervisor as set for in the EPA's Model Accreditation Program (40 CFR Part 763, Subpart E). A Competent Person must be present during the course of the asbestos related work. An AHERA accredited asbestos Contractor/Supervisor meets the training and definition of a Competent Person.

The workers must at a minimum meet the training requirements as listed in Title 8 CCR 1529 (8)(k)(9)(D). In summary, they must have a minimum of eight hours of training that includes the subjects listed in Title 8 CCR 1529 (k)(9)(H).

The following procedures must be followed:

1. The work shall be performed using wet methods. At a minimum, one worker must direct a water spray onto the portion of the building being demolished. The amount of water utilized must be adequate to prevent any release of visible dust into the air. The Contractor is responsible for controlling and channeling the flow of the waste water in a manner that meets local ordinances and regulatory agency requirements. The debris generated during the demolition process must be visually wet at all times prior to and while it is being containerized.
2. Effort should be made to remove the sections of asbestos-containing materials in as intact a condition as possible.
3. Debris must be containerized as described below. Debris must be containerized or kept wet during any work breaks. No loose debris may be left on the site overnight. Any building partially impacted by the work which will not be totally demolished by the end of the day must be completely wetted prior to the end of the shift.
4. Debris must be placed in a container that can be closed or sealed with poly sheeting. The container must have the inside lined with a minimum of two layers of reinforced ten millimeter thick poly sheeting with enough sheeting remaining on all sides to allow for burrito wrapping of the load. The two layers of poly sheeting must be independently closed and sealed with tape and spray glues. This wrapped material must then be labeled with the sign described in Title 8 CCR 1529 (k)(8) DANGER, CONTAINS ASBESTOS FIBERS, AVOID CREATING DUST, CANCER AND LUNG DISEASE HAZARD
5. Nonhazardous waste data forms for each container must be supplied to the Owner's CAC no later than the end of each day.
6. Contractor shall provide personal air monitoring for Class II as described in Title 8 CCR 1529 (f)(3)(A).
7. The Contractor shall develop a regulated area that keeps unauthorized persons out of the work area.
8. All personnel in the regulated area must wear, at a minimum, disposable clothing and a half-face respirator with P-100 (HEPA) cartridges.
9. Regardless of any exposure monitoring, the Contractor will require all workers to wear at a minimum protective suits and half-face negative pressure respirators. This requirement does not relieve the Contractor of performing personal monitoring of its workers.

**Part 23.11 - Contaminated Attic Space Procedures**

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

The Owner considers existing attic spaces to be contaminated with asbestos containing roofing debris unless otherwise determined or reported. The Owner has restricted access to all attic spaces to properly trained and protected personnel. Excluded from this restriction is opening a ceiling access hatch and entering the attic space with the upper body. Physical access into an attic space which includes a person placing their entire body in the attic space with intent to access other areas of the attic space is prohibited by unprotected and untrained personnel. No entry into these spaces shall be made regardless of duration of time or intent without compliance with the requirements outlined in these specifications.

Activities expected to take place in contaminated attic spaces most closely resemble the definition of "Class IV" work which is defined by Cal/OSHA in CCR; Title 8, Section 1529, as maintenance and custodial activities during which employees contact but do not disturb asbestos containing material (ACM) or presumed asbestos containing material (PACM).

To comply with the various regulations pertaining to this type of work in contaminated attic spaces, the following procedures are to be followed by individuals entering these areas.

1. Personnel assigned to enter contaminated attic spaces shall receive a minimum of two hours of asbestos awareness training pursuant to Title 8 1529.
2. Personnel assigned to wear respirators must be included in a respirator protection program as outlined in California General Industry Safety Order 8 CCR 1544. If the person must enter the attic space it will require use of at least a half-face negative pressure respirator with HEPA filters and disposable coveralls.
3. Prior to entry of a contaminated attic space each employee must pass a medical evaluation to ensure their fitness to wear a respirator.
4. A certified asbestos competent person must select the appropriate type of respirator(s) for the airborne asbestos levels anticipated to be encountered during such work.
5. Each employee assigned a respirator must successfully pass a qualitative or quantitative fit test prior to entry of a contaminated space.
6. A six (6) mil poly drop sheet must be placed at the entry to the space (approximately 6' X 6' in size) prior to entry.
7. Clean, potable water must be made available at the entry/exit for use to wash hands, faces, and equipment upon exiting from the space.
8. Employees entering contaminated attic spaces shall don two (2) sets of whole body coveralls, including head and foot covering. Appropriate type gloves for the work to be conducted must also be worn.
9. Disposal bags (6 mil poly), with the appropriate labeling, shall be made available at the entry/exit for disposal of contaminated protective clothing. One bag to be placed inside the space at the exit point and one shall be placed outside the space at the exit point.
10. Personnel working in contaminated attic spaces shall be instructed not to touch or disturb any suspect asbestos debris or materials encountered. If the extent of contamination is such that the employees can not perform their work without disturbing the material or debris, they shall exit the space until such time a certified asbestos abatement contractor has removed the material or debris and thoroughly encapsulated the area.
11. All tools or other equipment used in the course of the work shall be wiped down with clean, damp rags, prior to being removed from the space.
12. Prior to exiting the contaminated attic space, personnel shall remove their outer set of coveralls immediately adjacent to the exit point, leaving their respirator in place and dispose of the used coveralls in the waste bag.
13. Upon exiting the contaminated attic space, personnel shall remove the inner (or remaining) set of coveralls and place these in the waste bag provided for this purpose.
14. Personnel shall wash their hands prior to carefully removing their respirator and disposing of the filters in the waste bag provided.
15. Personnel shall at this time wash their faces and complete the decontamination of their respirators.

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

**General Requirements**

1. Except as amended here and in Section 24, Asbestos Specification/ Procedures, in all other Sections of this Exhibit shall be followed.
2. Removal of non-friable, non-hazardous, asbestos-containing glazing materials shall be coordinated and scheduled to be performed when there are favorable weather conditions, such as, low winds and no rain. If possible the work should be conducted when the interior space adjacent to the removal area is unoccupied.
3. Work should be halted if wind conditions occur which can or does cause removed glazing materials to be blown off the perimeter poly sheeting, or beyond the designated removal area perimeter.
4. No cutting, sanding, grinding, or removal by any other method which will result in the glazing being crumbled, crushed, or turned in to powder is to be used without review and approval by the Owner and the Owner's Representative.

**General Glazing Removal Instructions and Requirements**

1. Removal of non-friable, asbestos-containing, glazing materials, is designated as Class II work. Half-face, negative pressure respirators and disposable coveralls shall be used at a minimum by all workers, at all times, when within the regulated area.
2. All glazing materials shall be removed in an intact state to the extent feasible utilizing hand tools such as a hammer and chisel, or other implement or tool suitable for this type of work. At no time may power tools be used while following these removal requirements.
3. All glazing materials are to be pre-wet with an amended water solution or liquid encapsulant prior to removal, and as needed during removal.
4. All associated surfaces where removal of glazing has taken place shall be wet wiped and HEPA vacuumed prior to removal of the regulated area or any interior poly sheeting/critical barrier. Particular attention shall be directed at assuring all loose debris has been cleaned from the removal surfaces.
5. Upon completion of all activities worker shall clean exposed skin with hot soap and water, and check clothing for any glazing chips. Remove chips by hand or utilize a HEPA filter equipped vacuum.

**Pre-Abatement Preparation Requirements**

1. The worker may either seal the interior window surface with poly sheeting to create a critical barrier, or place one layer of 6 mill poly sheeting on the floor beneath the window incase a window pane is broken during removal. These critical barriers or floor coverings shall be installed prior to the initiation of the removal work, and removed upon completion of the removal work as appropriate.
2. If the interior space must remain occupied a critical barrier must be installed on the interior surface of the window or opening where removal must occur. This may be waived and a layer of sheeting may be placed on the floor or adjacent surfaces if the interior space is going to remain unoccupied during the entire removal operation.
3. The perimeter of the work area where glazing removal is to be conducted, shall be posted with barrier tape at a distance of at least 20 feet from the edge of the removal area. This barrier tape will provide a buffer zone, and assist in the restriction of non-removal personnel.



4. Poly sheeting shall be placed on the ground directly below the work area or on adjacent surfaces for a distance sufficient to contain all debris which may be generated during the work. The poly sheeting should be secured to the ground using tape, weights, or other means to assure the poly will remain in place and not be picked up by wind or become a trip hazard.

**Posting and Label Requirements for:**

**Regulated Area**

Access to regulated areas shall be posted as outlined by Cal/OSHA Title 8, 1529 (k)(7)(B) 1 and 2 with warning signs and barrier tape bearing the following information:

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

These postings are required to warn non-abatement personnel of the restricted access, and potential hazard which exists in the vicinity of the regulated area.

**Work Area Perimeter**

Work area perimeters shall be posted with barrier tape bearing one of the following descriptions:

- CAUTION** in black letters on a solid yellow background.
- DANGER** in black letters on a solid red background.
- DANGER ASBESTOS HAZARD** in black letters on a solid red background.

**Waste Material Containers**

Waste material containers, shall have warning labels affixed in accordance with Cal/OSHA Title 8, 1529 (k)(8)(A-D).

**DANGER  
CONTAINS ASBESTOS FIBERS  
MAY CAUSE CANCER  
CAUSES DAMAGE TO LUNGS  
DO NOT BREATHE DUST  
AVOID CREATING DUST**

**Waste Disposal**

1. Glazing waste may be disposed as non-hazardous asbestos waste, in a landfill permitted to accept non-friable, non-hazardous asbestos-containing material as long as the removal work was performed by hand utilizing hand tools, and the materials were not crushed, pulverized, or turned into powder during the removal process. If this does occur the waste must be reclassified as friable. If the asbestos-containing glazing 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.

**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 Subfloor Crawl Space Requirements**

Not Applicable

**Part 23.16 - Stucco/Texture 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 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. Removal of stucco/texture regardless of asbestos content over a surface area greater than 25 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 and fully operable with working shower and hot water heater, as well as properly stocked with towels, soap, and shampoo.
2. 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.
3. 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 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 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 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 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 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, 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 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 Alice Birney TK-8 Public Waldorf School, in preparation of this project. The contractor shall refer to the Hazardous Materials Survey report dated December 20, 2023, 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  
December 20, 2023

**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 YSAQMD, 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.

<b>Suspect Materials Found or Known TO Contain &gt;1% Asbestos (Category I)</b>				
<b>Sample ID#'s</b>	<b>Suspect Material</b>	<b>Asbestos Content/Type (%) by PLM</b>	<b>Location</b>	<b>Total Estimated Quantity</b>
ECG-23-6967-12C	Green Mottled 12" x 12" Vinyl Floor Tile, Yellow Mastic, Gray Leveler, Black Mastic	None Detected (Vinyl Floor Tile) None Detected (Yellow Mastic) None Detected (Gray Leveler) <b>1-2% Chrysotile (Black Mastic)</b>	Building C, Classroom 7 - Assumed Present Underneath Vinyl Floor Tile Throughout the Classroom	Up to 300 SF (Unknown Amount Beneath Vinyl Floor Tile)

<b>Suspect Materials Found or Known TO Contain &gt;1% Asbestos (Category II)</b>				
<b>Sample ID#'s</b>	<b>Suspect Material</b>	<b>Asbestos Content/Type (%) by PLM</b>	<b>Location</b>	<b>Total Estimated Quantity</b>
ECG-23-6967-61C	Gray Stucco, White Stucco, Black Mastic	None Detected (Gray Stucco) None Detected (White Stucco) <b>1-5% Chrysotile (Black Mastic)</b>	Buildings A, B, C, D, and H - Exterior at Metal Flashing between Roofs and Stucco Wall Systems	Up to 280 LF (Unknown Amount Behind Metal Flashing)

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.

\_\_\_\_\_  
Signature of Competent Person Who Will Be Onsite Date: \_\_\_\_\_ Employer: \_\_\_\_\_

\_\_\_\_\_  
Printed Name of Competent Person Who Will Be Onsite

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**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 and lead in paint inspection was conducted by Entek Consulting Group, Inc. for the Alice Birney TK-8 Public Waldorf School Project and a report was prepared on December 20, 2023. The report includes 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 the testing of paint chips of the project area 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 otherwise show 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 30 µg/m<sup>3</sup> 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 Protection Agency. Currently defined as containing lead in concentrations equal to or greater than 1.0 mg/cm<sup>2</sup>, 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 waste 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 an 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 50 µg/m<sup>3</sup> 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<sup>2</sup>), 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<sup>2</sup>, 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<sup>2</sup>, 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  $30 \mu\text{g}/\text{m}^3$  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  $50 \mu\text{g}/\text{m}^3$  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  $1.0 \text{ mg}/\text{cm}^2$ , 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 (I)(1)(B) and (I)(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 (I)(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 than 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<sup>2</sup>.

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 ( $15 \mu\text{g}/\text{m}^3$ ), 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  $5 \mu\text{g}/\text{m}^3$  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  $5 \mu\text{g}/\text{m}^3$  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 µg/m<sup>3</sup> 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 area 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 thoroughly 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 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 area 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 (l)(1-5). As stated in 8 1532.1 (l)(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 be 100 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 than 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.

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: \_\_\_\_\_

\_\_\_\_\_

**ALICE BIRNEY TK-8 PUBLIC WALDORF SCHOOL**

**EXHIBIT B**

**This Specification was Developed By:**

Jose Hernandez  
CDPH #10754  
December 20, 2023

Phone: (916) 632-6800  
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PART 5.0 RESULTS OF LEAD TESTING

<b>Paints/Coatings/ Materials Determined to be Lead Based Paint (LBP)</b>		
<b>Paint/Coating Color or Material</b>	<b>Lead Content (ppm)</b>	<b>Component/Location</b>
White Paint over Orange Paint	12,222	Interior Wood Ceiling Deck / Buildings E and F, Throughout Ceilings
Off-White Paint	6,687	Exterior Metal Flashing / Throughout Metal Trims between Stucco and Roof Systems

<b>Paints/Coatings/ Materials Determined to be Lead Containing Paint (LCP)</b>		
<b>Paint/Coating Color or Material</b>	<b>Lead Content (ppm)</b>	<b>Component/Location</b>
Light Gray Paint over Green Paint	1,327	Interior Plaster Walls / Building A, Throughout Walls
White Paint over Beige Paint	181	Interior Wood Windows / Building H, Throughout Wooden Window Components
Brown/Red Paint	1,093	Exterior Wood Fascia / Throughout Fascia's of the School Buildings

<b>Paints/Coatings/Materials Determined NOT TO Contain Lead (&lt;100 ppm)</b>	
<b>Paint/Coating Color or Material</b>	<b>Building Component</b>
White Paint	Interior Drywall Wall System / Throughout Building A
Pink-White Paint	Interior Drywall Wall System / Throughout Building B
Peach Paint	Interior Drywall Wall System / Throughout Building B
Light Green-White Paint	Interior Drywall Wall System / Throughout Building D
White Paint	Interior Drywall Wall System / Throughout Building E
Beige Paint over Gray Paint	Interior Metal Wall Panel / Throughout Wall Panels inside Building F
Light Gray Paint	Exterior Wood Siding / Throughout Exterior of Building K
Blue Paint over White Paint	Interior Drywall Wall System / Throughout Building J
Light Gray Paint	Interior Drywall Wall System / Throughout Restroom Portable
Beige Paint	Interior Drywall Wall System / Throughout Building G

**ALICE BIRNEY TK-8 PUBLIC WALDORF SCHOOL**

**EXHIBIT B**

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## 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 handling, 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 excerpts 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  $\mu\text{m}$  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  $\mu\text{g}/\text{m}^3$ , 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:**

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