

ADDENDUM No. 01
TO THE
CONTRACT DOCUMENTS
JUNE 28, 2023

PROJECT NO. M957295 SHER BLDG PHARM RELOCATE PHARM STAFF FROM N-S WING

#### **GENERAL**

This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated JUNE 2023, and consists of pages AD1-1 through AD1-2, various Contract Documents, Specifications Table of Contents, Specification Section 028213.19 Drawings Sheets (A0.01, I1.00, I2.06), and Hazmat report dated 06/19/2023. The following changes, additions and/or deletions shall be made to the following documents; all other conditions shall remain the same.

#### ITEM NO. I - CONTRACT DOCUMENTS

- BID FORM REMOVE Alternates.
- ADVERTISEMENT FOR BIDS CHANGE Bid Deadline/Opening to 11 a.m., Thursday, July 13, 2023.
- SUPPLEMENTARY INSTRUCTIONS TO BIDDERS
   CHANGE Item 6 to Bids will be opened at 11 a.m., Thursday, July 13, 2023.
- INFORMAITON AVAILABLE TO BIDDERS ADD Millennium Hazmat Report Dated 06/19/23.

#### ITEM NO. II - SPECIFICATIONS

- Specifications Table of Contents
   REPLACE Table of Contents in entirety with the attached.
- SECTION 012300 Alternates
   REMOVE specification section 012300 in entirety.

All carpet specified in the bid documents are Contractor Furnished / Contractor Installed and part of the base bid scope.

3. SECTION 028213.19 – Asbestos Related Work ADDED specification section as part of the bid documents.

Per the Hazmat report, asbestos was detected below the wood flooring in rooms 1900 and 1900B, the contractor is to include abatement for these two rooms as described in the added specification section 028213.19

#### ITEM NO. III - DRAWINGS

- 1. A0.01 TITLE SHEET
  - REPLACE A0.01 in entirety with the attached.
  - ADDED the following statement to <u>Scope of Work</u>:
    - "All existing window shades to be protected during construction."
  - ADDED the following sheet to Index of Drawings:
    - o I2.05 Flooring Distribution Plan Third Floor



# ADDENDUM No. 01 TO THE CONTRACT DOCUMENTS JUNE 28, 2023

- I1.00 FINISH SYMBOL LEGEND, GENERAL NOTES & SCHEDULE REPLACE I1.00 in entirety with the attached.
  - CPT1 revised specification:

Product Description	Manufacturer	Model Information	Finish Information
Carpet, Field	Patcraft	Collection: Rational	Color No.: 00550
Installation Pattern:		Style Series No.: 10459	Color Name: Intellect
Floor 1 & 2 – Quarter-turn		Style Series Name: Reason	
Floor 3 – Ashlar		Style: 24" X 24"	
		Thickness: .243"	

CPT3 added floor finish code and specification:

Product Description	Manufacturer	Model Information	Finish Information
Carpet	Interface	Collection: Palindrome & Alliteration	Color No.: 9722
Attic Stock		Style Series No.: 1391202500	Color Name: Nickel/Earth Rust
		Style Series Name: Alliteration	
		Size: 20" x 20"	
		Thickness: .15"	

- 3. I2.06 FLOORING DISTRIBUTION PLAN THIRD FLOOR
  - ADDED sheet to Set.

#### ITEM NO. IV - CLARIFICATIONS

1. Question: Does the bid form, or any documents being attached, require to be notarized? (It seems some of the language has been removed and/or updated.)

Answer: Bonds are the only documents that need to be notarized.

2. Question: Can we schedule a site walk for Thursday, June 29<sup>th</sup> at 10:00 am.

Answer: Yes, site walks can be scheduled for any of the respective bidders. Site walks can be scheduled via email request to Kori Marquez <a href="marquez@ucdavis.edu"><u>krmarquez@ucdavis.edu</u></a>, Faisal Alhabbal <a href="marquez@ucdavis.edu">faisal.Alhabbal@vanir.com</a>, and cc Summer Howard <a href="marquez@ucdavis.edu">sahoward@ucdavis.edu</a>.

DocuSigned by:

Ezori Marquery

22FE05F16092402....

Kori Marquez – Project Manager Facilities Design & Construction UC Davis Health

#### **BID FORM**

FOR: PROJECT NO. M057295

SHER BLDG PHARM

**RELOCATE PHARM STAFF FROM N-S WINGS** 

**UNIVERSITY OF CALIFORNIA** 

**UC DAVIS HEALTH** 

SACRAMENTO, CALIFORNIA

BID TO: Facilities Design and Construction

4800 2<sup>nd</sup> Avenue, Suite 3010 Sacramento, CA 95817 Telephone: 916-734-7024

BID FROM:		(Name of Bidder)	(Name of Bidder)				
_							
		(Address)					
-	(City)	(State)	(Zip Code)				
-	(Telephone Number)	(Fax Number)	(Email Address)				
	-	(Date Bid Submitted)					

NOTE: ALL PORTIONS OF THIS BID FORM MUST BE COMPLETED AND THE BID FORM MUST BE SIGNED BEFORE THE BID IS SUBMITTED. FAILURE TO DO SO WILL RESULT IN THE BID BEING REJECTED AS NON-RESPONSIVE.

#### 1. 0 BIDDER'S REPRESENTATIONS

Bidder, represents that a) Bidder and all Subcontractors, regardless of tier, has the appropriate current and active Contractor's licenses required by the State of California and the Bidding Documents; b) it has carefully read and examined the Bidding Documents for the proposed Work on this Project; c) it has examined the site of the proposed Work and all Information Available to Bidders; d) it has become familiar with all the conditions related to the proposed Work, including the availability of labor, materials, and equipment; e) Bidder and all Subcontractors, regardless of tier, are currently registered with the California Department of Industrial Relations pursuant to California Labor Code Section 1725.5 and 1771.1. Bidder hereby offers to furnish all labor, materials, equipment, tools, transportation, and services necessary to complete the proposed Work on this Project in accordance with the Contract Documents for the sums quoted. Bidder further agrees that it will not withdraw its Bid within sixty (60) days after the Bid Deadline, and that, if it is selected as the apparent lowest responsive and responsible Bidder, that it will, within 10 days after receipt of notice of selection, sign and deliver to University the Agreement in triplicate and furnish to University all items required by the Bidding Documents. If awarded the Contract, Bidder agrees to complete the proposed Work within One Hundred Thirty-Three (133) days after the date of commencement specified in the Notice to Proceed.

#### 2.0 ADDENDA

**NOT USED** 

3.0

Bidder acknowledges that it is Bidder's responsibility to ascertain whether any Addenda have been issued and if so, to obtain copies of such Addenda from University's Facility at the appropriate address stated on Page 1 of this Bid Form. Bidder therefore agrees to be bound by all Addenda that have been issued for this Bid.

4.0	LUMP SUM BASE BID
4.0	LUMP SUM BASE BID
	\$ Place figures in appropriate boxes)
	( lace liquies in appropriate boxes)
5.0	SELECTION OF APPARENT LOW BIDDER
Refer to	the Instructions to Bidders for selection of apparent low bidder.
6.0	UNIT PRICES – NOT USED
7.0	DAILY RATE OF COMPENSATION FOR COMPENSABLE DELAYS
	shall determine and provide below the daily rate of compensation for any Compensable Delay caused by University at eduring the performance of the Work.

Failure to fill in a dollar figure for the daily rate for Compensable Delay shall render the bid non-responsive. University will perform the extension of the daily rate times the multiplier.

(Place figures in appropriate boxes)

0

(multiplier)

The daily rate shown above will be the total amount of Contractor entitlement for each day of Compensable Delay caused by University at any time during the performance of the Work and shall constitute payment in full for all delay costs, direct or indirect, of the CM/Contractor and all subcontractors, suppliers, persons and entities under CM/Contractor on the Project, including without limitation all subcontractors added by Contract Amendment. The number of days of Compensable Delay shown as a "multiplier" above is not intended as an estimate of the number of days of compensable delay anticipated by the University. The University will pay the daily rate of compensation only for the actual number of days of Compensable Delay, as defined in the General Conditions; the actual number of days of compensable delay may be greater or lesser than the "multiplier" shown above.

2 of 6

#### 8.0 <u>ALTERNATES - NOT USED</u>

9.0	LIST	OF	<b>SUBCO</b>	NTRACTORS
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Bidder will	use Subcontractors for the V	Vork: Yes	No			
If "yes", pr	ovide in the spaces below (a	) the name, the location	of the place of business	, and the California contractor	r license number of each sub	ocontractor who will perform
work or la	bor or render service to the	prime contractor in or a	bout the construction of	the work or improvement, or a	a subcontractor licensed by	the state of California who

under subcontract to the prime contractor, specifically fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of ½ of 1% of the prime contractor's total bid, (b) the portion of the work which will be done by each subcontractor. The prime contractor shall list only one subcontractor for each such portion as is defined by the prime contractor in its bid.

PORTION OF THE WORK ACTIVITY				SUBCONTRACTOR		
(E.G. ELECTRICAL, MECHANICAL, CONCRETE)	NAME OF BUSINESS	LOCATION OF BUSINESS (CITY)	LICENSE NO.	AMOUNT OF SUBCONTRACT	DIR REGISTRATION No.	BUSINESS CATEGORY (CHECK ALL THAT APPLY)
						☐ SBE
						□ DVBE
						□ SBE
						□ DVBE
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						□ DVBE
						□ SBE
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						□ DVBE

(Note: Add additional pages if required.)

Total percentage of bid amount to be performed by SBEs and DVBEs: \_\_\_\_\_

#### 10.0 <u>LIST OF CHANGES IN SUBCONTRACTORS DUE TO ALTERNATES</u>

The information below must be provided for all changes in first-tier Subcontractors if University selects Alternates. List changes in Subcontractors only for those portions of the Work valued in excess of  $\frac{1}{2}$  of 1% of prime contractor's total bid.

PORTION OF THE WORK ACTIVITY		SUBCONTRACTOR				
(E.G. ELECTRICAL, MECHANICAL, CONCRETE)	NAME OF BUSINESS	LOCATION OF BUSINESS (CITY)	LICENSE NO.	AMOUNT OF SUBCONTRACT	DIR REGISTRATION No.	Business Category (CHECK ALL THAT APPLY)
						□ SBE
						□ DVBE
						□ SBE
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						□ DVBE
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						□ DVBE

(Note: Add additional pages if required.)

Total percentage of bid amount to be performed by SBEs and DVBEs: \_\_\_\_\_

# 11.0 **BIDDER INFORMATION** TYPE OF ORGANIZATION: (Corporation, Partnership, Individual, Joint Venture, etc.) IF A CORPORATION, THE CORPORATION IS ORGANIZED UNDER THE LAWS OF: THE STATE OF \_\_\_\_\_ NAME OF PRESIDENT OF THE CORPORATION: (Insert Name) NAME OF SECRETARY OF THE CORPORATION: (Insert Name) IF A PARTNERSHIP, NAMES OF ALL GENERAL PARTNERS: (Insert Names) CALIFORNIA CONTRACTORS LICENSE(S): (License Number) (Classification) (Expiration Date) (For Joint Venture, list Joint Venture's license and licenses for all Joint Venture partners.) DEPARTMENT OF INDUSTRIAL RELATIONS: (Expiration Date) (Registration No.) 12.0 **REQUIRED COMPLETED ATTACHMENTS** The following documents are submitted with and made a condition of this Bid: Bid Security in the form of \_\_\_\_\_ (Bid Bond or Certified Check) 2. **Qualification Questionnaire**

#### 13.0 <u>DECLARATION</u>

I, \_\_\_\_\_\_ hereby declare that I am the \_\_\_\_\_\_ (Printed Name) (Title)

of \_\_\_\_\_\_ submitting this Bid Form; that I am duly authorized to execute (Name of Bidder)

this Bid Form on behalf of Bidder; and that all information set forth in this Bid Form and all attachments hereto are, to the best of my knowledge, true, accurate, and complete as of its submission date.

I further declare that this bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not

pay, any fee to any corporation, part thereof to effectuate a collusive or sha		ny association, organization,	bid depository, or to any member	or agent
I declare, under penalty of perjury, tha	t the foregoing is	true and correct and that this	s declaration was executed at:	
-		(Name of City if within a City	, otherwise Name of County), in the	State
of(State)	, on	(Date)		
			i-matura)	
		(S	ignature)	



#### **ADVERTISEMENT FOR BIDS**

Subject to conditions prescribed by UC Davis Health, Facilities Design & Construction, sealed bids for a lump-sum contract are invited for the following work:

# PROJECT NO. M057295 SHER BLDG PHARM RELOCATE PHARM STAFF FROM N-S WINGS

Description of Work: Finish refresh for Pharmacy move from North/South Tower to Sherman Building.

Remove and replace existing flooring and base with new finishes per drawings and specifications and 1<sup>st</sup> and 2<sup>nd</sup> floor. At 3<sup>rd</sup> floor, replace up to 300 s.f. of stained carpet tiles. Wall preparation and painting as designated on 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> floors.

2<sup>nd</sup> floor (Centralized Telcom Room #2345 and Staff Lounge #325) scope includes removal of existing floor and installing new flooring after separate permit/construction project is ready to receive the flooring. This will require the flooring subcontractor to remobilize to install the flooring.

2<sup>nd</sup> floor to receive new corner guards as indicated.

All work in preparation for receiving furniture delivery as follows:

- 1st floor 10/8
- 2<sup>nd</sup> floor 10/19
- 3<sup>rd</sup> floor 11/8

<u>Bidder Qualifications:</u> To be eligible for consideration of award, bidders must have the minimum experience set forth in the Supplementary Instructions to Bidders. Bidders must submit the qualification documents as an attachment to the Bid Form.

Bidding Documents will only be available digitally at no cost to Bidders beginning **Tuesday**, **June 13**, **2023**, from our website at:

#### https://health.ucdavis.edu/facilities/work-with-us/contractors/out-to-bid

Bidders must attend a **MANDATORY VIRTUAL** pre-bid conference at **10 a.m.** on **Tuesday**, **June 20, 2023**. Interested participants must contact Summer Howard, Contract Administrator at sahoward@ucdavis.edu by 4 p.m. Monday, June 19, 2023, to obtain an invitation to the meeting. Bidders must be present at the pre-bid conference no later than 10 minutes after the scheduled start time in order to bid as a General Contractor and must attend both the conference and virtual job walk in their entirety. Attendees should plan to login 5-10 minutes prior to the scheduled meeting start time to avoid any disruptions. It will be up to the Contractor to schedule a physical job walk with the University Representative at a separate time prior to the Request for Information due date of Friday, June 23, 2023.

**Bids will be received only at:** Facilities Design and Construction, 4800 2<sup>nd</sup> Avenue, Suite 3010, Sacramento, CA 95817. **Electronic submissions are not acceptable**.

Bid Deadline/Opening: Sealed bids must be received on or before 11 a.m., Thursday, July 13, 2023.

Estimated Construction Cost: \$560,000.00

Bid Security in the amount of 10% of the Lump Sum Base Bid, excluding alternates, shall accompany each Bid. The Surety issuing the Bid Bond shall be, on the Bid Deadline, an admitted surety insurer (as defined in California Code of Civil Procedure Section 995.120).

The successful Bidder will be required to have the following California current and active contractor's license at the time of submission of the Bid: B – General Contractor.

Every effort will be made to ensure that all persons have equal access to contracts and other business opportunities with the University within the limits imposed by law or University policy. Each Bidder may be required to show evidence of its equal employment opportunity policy. The successful Bidder and its subcontractors will be required to follow the nondiscrimination requirements set forth in the Bidding Documents and to pay prevailing wages at the location of the work.

In addition, the University is committed to promoting and increasing participation of small business enterprises (SBEs) and disabled veteran business enterprises (DVBEs) relating to all goods and services covered under the awarded agreement, subject to any and all applicable obligations under state and federal law, and University policies. The awarded contractor shall make best efforts to provide qualified SBEs and DVBEs with the maximum opportunity to participate. Please contact hs-contracts@ucdavis.edu for further information.

The work described in the contract is a public work subject to section 1771 of the California Labor Code.

No contractor or subcontractor, regardless of tier, may be listed on a Bid for, or engage in the performance of, any portion of this project, unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 and 1771.1. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

The successful Bidder shall pay all persons providing construction services and/or any labor on site, including any University location, no less than the UC Fair Wage (defined as \$15 per hour) and shall comply with all applicable federal, state, and local working condition requirements.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
UC Davis Health

**JUNE 2023** 

#### SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

- 1. Contract Time: 133 days.
- 2. Requests for clarification or interpretation of the Bidding Documents must be in writing and received by 4 p.m., Friday, June 23, 2023. Questions received after the above noted deadline may be answered at the discretion of the University's Representative. Questions shall be addressed only to:

Kori Marquez, Project Manager, UCDH - <a href="marquez@ucdavis.edu"><u>krmarquez@ucdavis.edu</u></a>
Summer Howard, Contract Administrator, UCDH - <a href="marquesessangle-sahoward@ucdavis.edu"><u>sahoward@ucdavis.edu</u></a>
Faisal Alhabbal, Project Manager, Vanir - <a href="marquesessangle-faisal.alhabbal@vanir.com">faisal.alhabbal@vanir.com</a>

- Bidding Documents will only be available digitally at no cost to Bidders beginning Tuesday, June 13, 2023, from our website at: https://health.ucdavis.edu/facilities/work-with-us/contractors/out-to-bid
- 4. The <u>MANDATORY VIRTUAL</u> Pre-Bid Conference will be conducted via Zoom on Tuesday, June 20, 2023, beginning promptly at 10 a.m.
- 5. Bids will be received on or before the Bid Deadline and only at: Facilities Design and Construction
- 6. Bids will be opened at 11 a.m., Thursday, July 13, 2023, at: Facilities Design and Construction
- 7. Contractor will be assessed as liquidated damages the sum of \$500.00 for each day the Work remains incomplete beyond the expiration of the Contract Time. After Substantial Completion, the rate for liquidated damages shall be reduced to the sum of \$250.00 per day. See Article 5 of the Agreement for detailed requirements.
- 8. Posting of Bid Results. Bid results will also be posted at our website on the following link: https://health.ucdavis.edu/facilities/work-with-us/contractors/out-to-bid
- 9. **BIDDER QUALIFICATIONS:** To be eligible for consideration for award, Bidders must have the minimum experience described in the Qualification Questionnaire. To allow University to evaluate Bidders, each Bidder must submit qualification documents consisting of an experience record, and other required documents, with its Bid. This record must be described in the Qualification Questionnaire, which will be provided by University at the time of issuance of the Bidding Documents. To be eligible for consideration for award, the Bidder must demonstrate all of the criteria described in the Qualification Questionnaire.

[End]

#### **INFORMATION AVAILABLE TO BIDDERS**

The following information is made available for the convenience of bidders and is not a part of the Contract. The information is provided subject to the provisions of Article 3 of the General Conditions.

Millennium Hazmat Report Dated 06/19/23.

A schedule of the general prevailing per diem wage rates is available on the web at www.dir.ca.gov/DLSR.

The University of California has contracts for materials, equipment and/or services with the suppliers listed on the Office of the President Procurement Services website at <a href="https://www.ucop.edu/procurement-services/for-suppliers/construction-supplier-resources.html">https://www.ucop.edu/procurement-services/for-suppliers/construction-supplier-resources.html</a>

General Contractors or others submitting bids for University construction projects may enter into agreements with these suppliers that utilize the pricing and terms contained in the University-supplier agreements. The university does not represent or warrant that materials/equipment/services of these suppliers meet the requirements of the University's construction contracts.

Use of such suppliers shall not relieve Contractor from its obligation to meet all contractual requirements in any contracts with the University. The university will not be a party to any agreements with such suppliers and accepts no performance obligations or liability with respect to such agreements.

[End]





Corporate Offices: 4683 Chabot Drive, Suite 380 Pleasanton, CA 94588 925.808.6700 www.mecaenviro.com

UCDH# M057295 Project No. 21014.2017

June 19, 2023

Timothy Tuskamoto Project Manager U.C. Davis Health Facilities Design & Planning 4800 2<sup>nd</sup> Ave., Suite 3100 Sacramento, CA 95817

Sent via e-mail to: <a href="mailto:ttsukamoto@ucdavis.edu">ttsukamoto@ucdavis.edu</a>

Subject: Hazmat Survey - Sherman Building Finish Refresh Project M057295

Timothy Tsukamoto,

Millennium Consulting Associates (Millennium) is pleased to provide the results of a recent sampling of building materials scheduled to be disturbed during work activities at the finish refresh project at UC Davis Health Sherman Building in Sacramento, California.

A site visit was conducted on May 30, 2023, and samples of suspect asbestos-containing materials and suspect lead-containing paint were collected by Millennium staff Sarah Anderson-Flores, CSST No. 19-6445 and LRC-00006314. The building material survey included a sample collection of all suspect lead and asbestos materials scheduled to be disturbed during the renovation project and included drywall and joint compound, base cove mastic, and carpet mastic. The asbestos samples were collected and analyzed in accordance with Sacramento Metropolitan Air Quality Management District (SMAQMD) Rule 902 for asbestos-containing materials scheduled to be impacted by renovation activities. Lead samples were collected and analyzed in accordance with industry standards.

- The laboratory analytical results of the samples collected detected no lead above the Limit of Detection (LOD).
- An 8% concentration of chrysotile asbestos (ACM) was identified in the paper flooring layer located in the doorway threshold of the 1900B room. This paper flooring layer, possibly a former linoleum material or paper backing, is situated between a composite wood layer and the concrete subfloor/foundation. Above the paper flooring and composite wood layers, a blue/grey carpeting was observed as the finished floor. The removal of the asbestos material necessitates the use of Cal/OSHA-approved Class II methods CCR Title 8, Section 1529. Based on observations, it is estimated that this material is confined to rooms 1900 and 1900B, covering an approximate range of 310 to 1,030 square feet, and no instances of this asbestos-containing material were observed elsewhere in the building.
- This material is prone to becoming brittle and easily crumbled or pulverized with hand pressure.



- Dispose of this material as RACM (Regulated Asbestos-Containing Material) per 40 CFR Part 61, Subpart M.
- The SMAQMD Rule 902 requires prior notification 10 days before commencing any abatement work as this material is >1% ACM and is more than 160 square feet of removal. A licensed asbestos abatement contractor is required to perform the work of removing the RACM before any demolition activity disturbs the paper flooring layer.

The planned work does not qualify as lead work. Millennium does not certify the building to be lead and/or asbestos free. The planned work does qualify for asbestos Class II work and requires notification.

The following tables present the summary of the lead and asbestos sample laboratory analytical results.

Table 1. Summary Results of Asbestos Sampling by Homogenous Area – First Floor – 1000s to 1700s

Sample Numbers	Bulk Material Description	Sample Locations	НА	Result
26.101, 26.105	Orange Mastic, white leveling compound under Grey Carpet	1700B, 1300A Floor	1	ND
26.102, 26.103, 26.104	Surfacing, taping mud (joint compound), and Drywall	1700B, 1300A Wall	2	ND
26.106. 26.107	White Compound, Tan Mastic, Drywall under Tan Rubber Cove base	1300, 1300A Wall	3	ND
26.108, 26.109, 26.110	Orange Mastic under Blue/Grey Carpet	1100, 1300 Floor	4	ND
26.111, 26.112	Red/Pink VCT and Yellow Mastic	1700 Floor	5	ND
26.113, 26.114	Pink/Grey with Specs VCT and Yellow Mastic	1300C Floor	6	ND
26.115, 26.116	Grey with Specs VCT and Yellow Mastic	1100G Floor	7	ND
26.117, 26.118	Dark Grey with Specs VCT and Yellow Mastic	1100G Floor	8	ND
26.119, 26.120	Wood Vinyl with Orange Mastic	1100G Floor	9	ND
26.121, 26.122	Purple/Grey VCT with Specs and Orange Mastic	1300C Floor	10	ND
26.123, 26.124	Granite Tile and Mortar	Lobby Floor	11	ND

Table 2. Summary Results of Asbestos Sampling by Homogenous Area – First floor – 1900s



Sample Numbers	Bulk Material Description	Sample Locations	НА	Result
26.1901, 26.1902, 26.1903	Drywall Joint Compound	1900s East Walls	19- 1	ND
26.1904, 26.1905, 26.1906	White Compound under Green/blue Mastic under Grey VCT under Blue Carpet	Entry Floor	19- 2	ND
26.1907, 26.1908	Pale yellow mastic under Grey carpet with blotch pattern over composite wood layer	1900B Floor	19- 3	ND
26.1909, 26.1910	Paper flooring with yellow/orange mastics on its top layer. The paper flooring layer is under a wood composite layer, which is under the Grey carpet with blotches and pale-yellow carpet mastic	1900B Floor Threshold	19-	8% Chrysotile (paper flooring), Yellow/orange Mastics are all ND above the paper flooring layer.
26.1911, 26.1912	Grey compound and yellow mastic under the Grey carpet	1900B Floor Threshold	19- 5	ND

Table 3. Summary Results of Ashestos Sampling by Homogenous Area – Second Floor

Sample Numbers	Bulk Material Description	Sample Locations	НА	Result
26.201, 26.202, 26.203	Drywall and joint compound	Rm 2200, copy room and Rm 2600B	2-1	ND
26.204, 26.205, 26.206, 26.207	Light tan rubber cove base and tan mastic	Room 2200	2-2	ND
26.208, 26.209	Brown rubber cove base with tan mastic	Copy room	2-3	ND
26.210, 26.211	Purple/Grey specs VCT with mastic	2200	2-4	ND
26.212, 26.213	Light pink/grey with specs VCT and mastic	2200	2-5	ND
26.214, 26.215	Dark grey carpet tiles with yellow mastic	2200	2-6	ND
26.216, 26.217, 26.218, 26.219	Blue/grey carpet room 2600B with yellow mastic	2600B, Hallway	2-7	ND
26.220, 26.221	Blue patches of carpet with yellow mastic	2200, hallway adjacent to	2-8	ND



Sample Numbers	Bulk Material Description	Sample Locations	НА	Result
		2200		

Table 4. Summary Results of Asbestos Sampling by Homogenous Area – Third Floor

Sample Numbers	Bulk Material Description	Sample Locations	НА	Result
26.301, 26.302	Ceiling tile	Reception	3-1	ND

Table 5. Summary Results of Lead Sampling

Sample ID	Description	Result percent by weight (% wt)	Result part per million (ppm) 1	LBP/LCP?
26.P01, 26.P02, 26.P03, 26.P04	Off-white paint	<0.0080	<80	No/No

<sup>&</sup>lt;sup>1</sup> Result  $\geq$  5,000 ppm = lead-based paint

Result < 5,000 ppm but > LOD = lead-containing paint.

#### **Limiting Conditions**

Millennium conducted the renovation survey on May 30, 2023 in general accordance with industry standards for bulk asbestos and lead paint sampling procedures in existence at the time of the project. The conclusions and recommendations presented in this report are based on the applicable standards of our profession at the time this report was prepared. Copies of this report are furnished to provide the factual data that were gathered and summarized in the report.

The analysis and recommendations submitted in this report are based in part on the data obtained from specific and discrete sampling locations. However, the nature and extent of variations between the sampling locations may not become evident until planned renovation and/or demolition procedures commence. If potential variations are identified during renovation or demolition activities, it may be necessary to conduct additional bulk sampling.

#### Conclusions and Recommendations

Based on the analytical results of our lead and asbestos sampling, Millennium makes the following recommendations;

1. The paint chip samples collected indicate that the off-white wall paint scheduled to be disturbed by the renovation activities was found to contain no detectable level of lead. While



Millennium does not certify the work area to be lead-free, work may proceed as planned without the addition of precautions related to lead.

2. The bulk samples for asbestos (26.1909 and 26.1910) were found to have an 8% Chrysotile in the 1900B and 1900 rooms paper flooring layer which is at the door threshold under the blue carpet and wood composite layers. However, if the plans involve removing the existing flooring down to the concrete subflooring, it is crucial to undertake abatement measures for the material prior to demolition or renovation. In such cases, work practices should include the implementation of protective measures and precautions specifically designed to address the presence of asbestos. Also, notification is required prior to the start of abatement.

This report has been prepared for the exclusive use of the Client for specific application to the limited asbestos survey performed on the property, specifically, those areas as directed by representatives of UC Davis Facilities, Design, and Construction. This report may not be copied (except by our client) without the written permission of Millennium Consulting Associates, Pleasanton, California. No other representation, expressed or implied, is made.

Millennium appreciates the opportunity to submit this proposal. If you have any questions or need additional information, please feel free to contact me at (925) 808-6700. Thank you.

Sincerely,

Millennium Consulting Associates A MECA Consulting, Inc. Company

Sarah Anderson-Flores, CSST, CDPH I/A

Project Manager, Building Sciences

Jeremy Malson, CIH, CSP, CAC, CDPH I/A Certified Asbestos Consultant Principal

#### Attachments:

- 1. EMSL Analytical Reports for Asbestos and COCs
  - a. 092312854 1st floor (1100 to 1700)
  - b. 092313026 1st floor (1900s)
  - c.  $092312855 2^{nd}$  floor
  - d.  $092312846 3^{rd}$  floor
- 2. EMSL Analytical Reports for Lead and COCs
  - a. 092312791
- 3. Photolog
- 4. Sample Location Map



# Asbestos Chain of Custody EMSL Order Number (Lab Use Only): # 0 9 2 3 1 2 8 5 4

EMSL ANALYTICAL, INC. 464 McCormick Street SAN LEANDRO, CA 94577

PHONE: (510) 895-3675 FAX: (510) 895-3680

			EMSI E	Bill to: X Same Dif	ferent		
Company: Millennium	Consulting Associates			ifferent note instructions in Cor			
Street: 4683 Chabot Dri	ive . Suite 380		Third Party Billing re	equires written authorizatio	on from third party		
City: Pleasanton		Province: CA	Zip/Postal Code: 945		try: USA		
Report To (Name): Jer	nice Feiner		Fax #: (925) 808-6708		and a second		
Telephone #: (925) 808			Email Address: jfeiner	r@mecaenviro.com			
Project Name/Number		Sherman Builde	ng Finish Refres	h			
	ts: Fax Email	Purchase Order	: 5AF05302301 U.S	S. State Samples Take	n: California		
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☐ w/ OSHA 8hr. TWA		☐ NIOSH 7402		☐ Wipe - ASTM D648	80		
A contraction on the same of t	PLM - Bulk (reporting limit)			☐ Carpet Sonication	(EPA 600/J-93/167)		
☑PLM EPA 600/R-93/1*		☐ ISO 10312		Soil/Rock/Vermiculite			
PLM EPA NOB (<1%) <u>TEM - Bulk</u>				☐ PLM CARB 435 - A			
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Controlled Document - Asbestos COC - R2 - 1/12/2010

Page 1 of 3 pages

# CONSULTING ASSOCIATES A MECA Consulting, Inc. Company

Jaf

# **Chain of Custody Form Asbestos Bulk Sampling**

Requested Turn Around Time 1 week

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Millennium Consulting Assoc. • 401 Roland Way, Suite 250 Oakland, CA 94621 • Phone 925-808-6700 • Fax 925-808-6708

3

# #092312854

## MILLENNIUM CONSULTING ASSOCIATES A MECA Consulting, Inc. Company

JAF

# Chain of Custody Form Asbestos Bulk Sampling

Requested Turn Around
Time

1 week

Millenniur No.	n Project	t	Sam	pling By	N	o. of S	amples	Date Sampled	Paş	ge No.		Total Pages
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26.117	Dark	Grey	with spe	es uct +	8	M	1100G-,	Floor, Stora	ge.	G	2	9187
26.118	Dark	Grei		us UCT+	ති	Μ	11006	Floor, Store	ege	G	N	915F
26.119				nge mastic	9	М	11006	Floor, Ston	age	ۍ	N	915F
96.4 <del>80</del>	wood	Ula	yl , ocan	ge mastic	9	М	1100G	Floor, Stor	age	سو	<i>N</i>	91SF
26.121	Purple	e/61	rey UCT u	specs &	10	М	12000	Floor, Stor	oge	G	2	515=
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Millennium Consulting Assoc. • 401 Roland Way, Suite 250 Oakland, CA 94621 • Phone 925-808-6700 • Fax 925-808-6708



# **EMSL** Analytical, Inc.

464 McCormick Street San Leandro, CA 94577

Tel/Fax: (510) 895-3675 / (510) 895-3680 http://www.EMSL.com / sanleandrolab@emsl.com EMSL Order: 092312854
Customer ID: MECA62
Customer PO: SAF05302301

Project ID:

Phone:

Attention: Jenice Feiner

Millennium Consulting Associates, Inc.

4683 Chabot Drive, Suite 380 Pleasanton, CA 94588

Fax:

**Received Date:** 06/12/2023 8:45 AM **Analysis Date:** 06/16/2023 - 06/19/2023

Collected Date: 06/12/2023

Project: UCDM SHERMAN BUILDING FINISH REFRESH

#### Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

		Non-Asbestos			<u>Asbestos</u>	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type	
26.101-Mastic	ORANGE MASTIC + WHITE LEVELING COMPOUND	Orange Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected	
26.101-Leveling Compound	ORANGE MASTIC + WHITE LEVELING COMPOUND	White Non-Fibrous Homogeneous		70% Gypsum 30% Non-fibrous (Other)	None Detected	
092312854-0001A						
26.102	DRYWALL SURFACING	White Non-Fibrous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
092312854-0002	DD)/////	Homogeneous		2004.0		
26.103-Drywall	DRYWALL SURFACING + TAPING MUD	White Non-Fibrous Homogeneous		80% Gypsum 20% Non-fibrous (Other)	None Detected	
26.103-Taping Mud	DRYWALL SURFACING +	White Non-Fibrous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
092312854-0003A	TAPING MUD	Homogeneous				
26.103-Mastic	DRYWALL SURFACING + TAPING MUD	Beige Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected	
26.104-Drywall	DRYWALL SYSTEM	White Non-Fibrous		80% Gypsum 20% Non-fibrous (Other)	None Detected	
092312854-0004		Homogeneous		20% Non hibrode (Gulet)		
26.104-Joint Compound	DRYWALL SYSTEM	White Non-Fibrous		70% Ca Carbonate 30% Non-fibrous (Other)	None Detected	
26.104-Mastic	DRYWALL SYSTEM	Homogeneous  Beige Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected	
092312854-0004B		Homogeneous		(- /		
26.105-Mastic	ORANGE MASTIC & WHITE LEVELING COMPOUND	Orange Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected	
26.105-Leveling Compound	ORANGE MASTIC & WHITE LEVELING COMPOUND	White Non-Fibrous Homogeneous		70% Gypsum 30% Non-fibrous (Other)	None Detected	
26.106-Mastic	TAN MASTIC, COVE BASE	Beige Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected	
26.106-Compound	TAN MASTIC, COVE BASE	White Non-Fibrous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
092312854-0006A		Homogeneous		. ,		
26.107-Mastic	TAN MASTIC, COVE BASE	White Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected	
092312854-0007		Homogeneous				
26.107-Compound	TAN MASTIC, COVE BASE	White Non-Fibrous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
092312854-0007A		Homogeneous				



EMSL Order: 092312854 Customer ID: MECA62 Customer PO: SAF05302301

Project ID:

# Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-A	Asbestos	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
26.107-Drywall	TAN MASTIC, COVE BASE	White Non-Fibrous		80% Gypsum 20% Non-fibrous (Other)	None Detected
092312854-0007B		Homogeneous			
26.108	ORANGE MASTIC, CARPET	Orange Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312854-0008		Homogeneous			
26.109	ORANGE MASTIC, CARPET	Orange Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312854-0009		Homogeneous			
26.110	ORANGE MASTIC, CARPET	Orange Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312854-0010		Homogeneous			
26.111-VCT	RED/PINK VCT + MASTIC (YELLOW)	Pink Non-Fibrous		60% Matrix 40% Non-fibrous (Other)	None Detected
092312854-0011		Homogeneous			
26.111-Mastic	RED/PINK VCT + MASTIC (YELLOW)	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312854-0011A	DED/DINK VOT	Homogeneous		000/ Markin	Non- Bataria
26.112-VCT 092312854-0012	RED/PINK VCT + MASTIC (YELLOW)	Pink Non-Fibrous Homogeneous		60% Matrix 40% Non-fibrous (Other)	None Detected
	DED/DINK VOT			200/ Matrix	None Detected
26.112-Mastic	RED/PINK VCT + MASTIC (YELLOW)	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
	DINIK/ODEW VOT	Homogeneous		000/ Markin	Non- Bataria
26.113-VCT	PINK/GREY VCT + MASTIC (YELLOW)	Gray Non-Fibrous		60% Matrix 40% Non-fibrous (Other)	None Detected
092312854-0013		Homogeneous			
26.113-Mastic	PINK/GREY VCT + MASTIC (YELLOW)	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
	DINIZ/ODEV VOT	Homogeneous		COO/ Martin	News Datastad
26.114-VCT 092312854-0014	PINK/GREY VCT + MASTIC (YELLOW)	Gray Non-Fibrous Homogeneous		60% Matrix 40% Non-fibrous (Other)	None Detected
-	PINK/GREY VCT +	Yellow		80% Matrix	None Detected
26.114-Mastic	MASTIC (YELLOW)	Non-Fibrous Homogeneous		20% Non-fibrous (Other)	None Detected
26.115-VCT	GREY WITH SPECS,	Gray		60% Matrix	None Detected
092312854-0015	VCT + MASTIC (YELLOW)	Non-Fibrous Homogeneous		40% Non-fibrous (Other)	None Detected
26.115-Mastic	GREY WITH SPECS,	Yellow		80% Matrix	None Detected
092312854-0015A	VCT + MASTIC (YELLOW)	Non-Fibrous Homogeneous		20% Non-fibrous (Other)	None Detected
26.116-VCT	GREY WITH SPECS,	Gray		60% Matrix	None Detected
092312854-0016	VCT + MASTIC (YELLOW)	Non-Fibrous Homogeneous		40% Non-fibrous (Other)	None Beledied
26.116-Mastic	GREY WITH SPECS,	Yellow		80% Matrix	None Detected
092312854-0016A	VCT + MASTIC (YELLOW)	Non-Fibrous Homogeneous		20% Non-fibrous (Other)	Holio Bolosto
26.117-VCT	DARK GREY WITH SPECS VCT +	Gray Non-Fibrous		60% Matrix 40% Non-fibrous (Other)	None Detected
092312854-0017	MASTIC (YELLOW)	Homogeneous		,	
26.117-Mastic	DARK GREY WITH SPECS VCT +	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312854-0017A	MASTIC (YELLOW)	Homogeneous		· ,	
26.118-VCT	DARK GREY WITH SPECS VCT +	Gray Non-Fibrous		60% Matrix 40% Non-fibrous (Other)	None Detected
092312854-0018	MASTIC (YELLOW)	Homogeneous			



EMSL Order: 092312854
Customer ID: MECA62
Customer PO: SAF05302301

Project ID:

# Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-A	Asbestos	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
26.118-Mastic	DARK GREY WITH SPECS VCT +	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312854-0018A	MASTIC (YELLOW)	Homogeneous			
26.119-Vinyl	WOOD VINYL, ORANGE MASTIC	Brown/Gray Non-Fibrous		60% Matrix 40% Non-fibrous (Other)	None Detected
092312854-0019		Homogeneous			
26.119-Mastic	WOOD VINYL, ORANGE MASTIC	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312854-0019A		Homogeneous			
26.120-Vinyl	WOOD VINYL, ORANGE MASTIC	Brown/Gray Non-Fibrous		60% Matrix 40% Non-fibrous (Other)	None Detected
092312854-0020		Homogeneous			
26.120-Mastic	WOOD VINYL, ORANGE MASTIC	Yellow Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected
	DUDDI E/ODEV/ VOT			000/ 14:45:	N D. t t l
26.121-VCT 092312854-0021	PURPLE/GREY VCT W/ SPECS & MASTIC (ORANGE)	Gray Non-Fibrous Homogeneous		60% Matrix 40% Non-fibrous (Other)	None Detected
26.121-Mastic	PURPLE/GREY VCT	Yellow		80% Matrix	None Detected
20. 12 1-Mastic 092312854-0021A	W/ SPECS & MASTIC (ORANGE)	Non-Fibrous Homogeneous		20% Non-fibrous (Other)	None Detected
26.122-VCT	PURPLE/GREY VCT W/ SPECS &	Gray Non-Fibrous		60% Matrix 40% Non-fibrous (Other)	None Detected
092312854-0022	MASTIC (ORANGE)	Homogeneous			
26.122-Mastic	PURPLE/GREY VCT W/ SPECS &	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312854-0022A	MASTIC (ORANGE)	Homogeneous			
26.123-Tile	GRANITE TILE AND MORTAR	White Non-Fibrous		70% Ca Carbonate 30% Non-fibrous (Other)	None Detected
092312854-0023		Homogeneous			
26.123-Mortar	GRANITE TILE AND MORTAR	Gray/Tan Non-Fibrous		50% Quartz 30% Ca Carbonate	None Detected
092312854-0023A		Homogeneous		20% Non-fibrous (Other)	
26.123-Compound	GRANITE TILE AND MORTAR	White Non-Fibrous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected
092312854-0023B		Homogeneous			
26.124-Tile	GRANITE TILE AND MORTAR	White Non-Fibrous		70% Ca Carbonate 30% Non-fibrous (Other)	None Detected
092312854-0024		Homogeneous			
26.124-Mortar	GRANITE TILE AND MORTAR	Gray Non-Fibrous		50% Quartz 30% Ca Carbonate	None Detected
092312854-0024A		Homogeneous		20% Non-fibrous (Other)	



**EMSL Order:** 092312854 **Customer ID:** MECA62 **Customer PO:** SAF05302301

Project ID:

Analyst(s)

Gavin Lee (27)

Xeena Paul (21)

Cecilia Yu, Laboratory Manager

or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc San Leandro, CA NVLAP Lab Code 101048-3, WA C884



# Asbestos Chain of Custody EMSL Order Number (Lab Use Only): 092313926

EMSL ANALYTICAL, INC. 464 McCormick Street SAN LEANDRO, CA 94577

PHONE: (510) 895-3675 FAX: (510) 895-3680

Company: Millennium Consulting Associates	5		<b>Bill to:</b> ☒ Same ☐ Di ifferent note instructions in Co			
Street: 4683 Chabot Drive, Suite 380		Third Party Billing r	equires written authorization	on from third party		
City: Pleasanton State	e/Province: CA	Zip/Postal Code: 945	See Cour	ntry: USA		
Report To (Name): Jenice Feiner		Fax #: (925) 808-6708				
Telephone #: (925) 808-6700	N X	Email Address: jfeine	r@mecaenviro.com	a 他 45%		
	Sneman Buildi	ng Finish Refresh				
Please Provide Results:   Fax   Em	nail Purchase Order	: SAF05302302 U.	S. State Samples Take	n: California		
		Options* - Please Che				
*For TEM Air 3 hours/6 hours, please call ahead to san authorization form for this service. Analy	schedule.*There is a premiur	n charge for 3 Hour TEM AH	P6 Hour 1 Week ERA or EPA Level II TAT. \( \) Inditions located in the Analytic	ou will be asked to sign		
PCM - Air	<u>TEM − Air</u>	5hr TAT (AHERA only)	TEM- Dust			
☐ NIOSH 7400	☐ AHERA 40 CFF	R, Part 763	☐ Microvac - ASTM	D 5755		
☐ w/ OSHA 8hr. TWA		☐ Wipe - ASTM D64	80			
PLM - Bulk (reporting limit)	EPA Level II		☐ Carpet Sonication (EPA 600/J-93/167)			
<b>TPLM EPA 600/R-93/116 (&lt;1%)</b>	☐ ISO 10312		Soil/Rock/Vermiculi			
PLM EPA NOB (<1%)	TEM - Bulk		PLM CARB 435 - A			
Point Count	☐ TEM EPA NOB	I / Ci-li- NOO	PLM CARB 435 -			
☐ 400 (<0.25%) ☐ 1000 (<0.1%)  Point Count w/Gravimetric	☐ NYS NOB 198.4	(non-triable-NY)	TEM CARB 435 -			
☐ 400 (<0.25%) ☐ 1000 (<0.1%)		ysis-EPA 600 sec. 2.5	☐ TEM CARB 435 - C (0.01% sensitivity) ☐ EPA Protocol (Semi-Quantitative)			
☐ NYS 198.1 (friable in NY)	TEM - Water: EPA		☐ EPA Protocol (Quantitative)			
☐ NYS 198.6 NOB (non-friable-NY)		Waste Drinking	Other:	and diver		
□ NIOSH 9002 (<1%)	A CONTRACTOR OF THE PROPERTY O	Waste Drinking				
		arly Identify Homoge	enous Group			
Samplers Name: Sarah Anders			1// 1			
Samplers Name.	301 1000	Samplers Signature:	Volume/Area (Air)	Date/Time		
Sample #	Sample Description		HA # (Bulk)	Sampled		
SEE	ATTACHED	)	400	71000		
Carlo San Carlo			100			
	The second					
Client Sample # (s): 26 . 1901	- 26	1912	Total # of Samples:	12		
Relinquished (Client): Sullaut	_ Date: C	05/30/23	Time	5:45PM		
Received (Lab): JM FFX (S)	Date:	0612202	3 - 0 8 4 5 Time:			
Comments/Special Instructions:	Duto.		i ilite.			

Page 1 of 2 pages

2

# 997313026

## MILLENNIUM CONSULTING ASSOCIATES A MECA Consulting, Inc. Company

# Chain of Custody Form Asbestos Bulk Sampling

Requested Turn Around
Time

1-week Millennium Project No. of Samples **Total Pages** Sampling By Date Sampled Page No. No. of 2 Surah Anderson-Flore 5/30/23 **Job Name & Location: Billing Information:** Sherman Bluilding Finish Refresh 2300 Stockton Blud, Sacramento PO#: 8AF 05302802 **Building No:** 1900 First Floor Lab Submitted to: EMSL Son Leandro Sample HM Material Description Cond. Friable Location of Sample Quantity ID No. Type 1900 26.1901 Orywall East 3,000-5 East 26,1402 1900 26,1903 East 26.1904 Blue carpet mastic 50 -st UCT CGrey 26 1905 1900, M .1900 400 T (Grey 3 G 2 300 · SF Grey carpet blotch pattern 26,1908 19.00B 3 M 26.1909 Pule yellandorunge mastic Z∞-∑ Μ under grey carpet 26, 1910 126.1911 Grey compound and yellow 30057 mastic under grey carpe 26,1912 1900 BFLOOF, Threshold MIS HM (Homogeneous Material) Type Code Cond. (Condition) Code Friable Code Quantity Code S = Surfacing T = TSI M = Misc.G = Good F = Fair P = Poor  $Y = Yes \mid N = No$ sf = Square Feet | If = Linear Feet cf = Cubic Feet Sampling Comments: E-mail Results to: jfeiner@mecaenviro.com, Date Time Samples Relinquished By Samples Received By 0-2-3-0-8-4

Millennium Consulting Assoc. • 401 Roland Way, Suite 250 Oakland, CA 94621 • Phone 925-808-6700 • Fax 925-808-6708



# **EMSL** Analytical, Inc.

464 McCormick Street San Leandro, CA 94577

Tel/Fax: (510) 895-3675 / (510) 895-3680 http://www.EMSL.com / sanleandrolab@emsl.com

EMSL Order: 092313026 Customer ID: MECA62 Customer PO: SAF05302302

Project ID:

Attention: Jenice Feiner

Millennium Consulting Associates, Inc.

4683 Chabot Drive, Suite 380 Pleasanton, CA 94588

Phone: Fax:

Analysis Date:

Received Date: 06/12/2023 8:45 AM

06/15/2023 - 06/20/2023 **Collected Date:** 05/30/2023

Project: UCDM SHEMAN BUILDING FINISH REFRESH - SAF05302302

# Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbe	<u>stos</u>	<u>Asbestos</u>	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type	
26.1901-Drywall	DRYWALL - 1900 WALL EAST	White Non-Fibrous		80% Gypsum 20% Non-fibrous (Other)	None Detected	
092313026-0001		Homogeneous				
26.1901-Joint Compound	DRYWALL - 1900 WALL EAST	White Non-Fibrous Homogeneous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
092313026-0001A						
26.1902-Drywall	DRYWALL - 1900 WALL EAST	White Non-Fibrous		80% Gypsum 20% Non-fibrous (Other)	None Detected	
092313026-0002	DD\(44411 4000	Homogeneous		227 2 2 1 1		
26.1902-Joint Compound	DRYWALL - 1900 WALL EAST	White Non-Fibrous Homogeneous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
092313026-0002A						
26.1903-Drywall	DRYWALL - 1900 WALL EAST	White Non-Fibrous		80% Gypsum 20% Non-fibrous (Other)	None Detected	
092313026-0003	DDVAVALL 4000	Homogeneous		2007 O . O . I	None Detect 1	
26.1903-Joint Compound	DRYWALL - 1900 WALL EAST	White Non-Fibrous Homogeneous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
092313026-0003A						
26.1904-Mastic	BLUE CARPET MASTIC AND VCT (GREY) - 1900, FLOOR ENTRY	Green Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected	
26.1904-Tile 092313026-0004A	BLUE CARPET MASTIC AND VCT (GREY) - 1900,	Gray/Tan Fibrous Homogeneous	30% Cellulose	40% Ca Carbonate 20% Matrix 10% Non-fibrous (Other)	None Detected	
This is a composite result of	FLOOR ENTRY  f both vinyl and backing layer					
26.1904-Compound 092313026-0004B	BLUE CARPET MASTIC AND VCT (GREY) - 1900, FLOOR ENTRY	White Non-Fibrous Homogeneous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
26.1905	BLUE CARPET MASTIC - 1900,	Green Non-Fibrous	10% Synthetic	80% Matrix 10% Non-fibrous (Other)	None Detected	
092313026-0005 Result includes a small amo	FLOOR ENTRY ount of inseparable attached m	Homogeneous				
26.1906-Mastic	BLUE CARPET MASTIC AND VCT	Blue Non-Fibrous		90% Matrix 10% Non-fibrous (Other)	None Detected	
092313026-0006	(GREY) - 1900, FLOOR ENTRY	Homogeneous		, ,		
26.1906-Tile	BLUE CARPET MASTIC AND VCT	White/Beige Fibrous	10% Synthetic	60% Matrix 30% Non-fibrous (Other)	None Detected	
092313026-0006A	(GREY) - 1900, FLOOR ENTRY	Homogeneous		,		
This is a composite result of	f both vinyl and backing layer					

Initial report from: 06/20/2023 18:45:59



EMSL Order: 092313026 Customer ID: MECA62 Customer PO: SAF05302302

Project ID:

## Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbest	os estados est	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
26.1907 092313026-0007	PALE YELLOW MASTIC ASSOC. W. GREY CARPET BLOTCH PATTERN OVER WOOD - 1900B FLOOR, CARPET	Tan/Yellow Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected
26.1908 092313026-0008	PALE YELLOW MASTIC ASSOC. W. GREY CARPET BLOTCH PATTERN OVER WOOD - 1900B FLOOR, CARPET	Tan/Yellow Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected
26.1909-Paper Flooring 092313026-0009  This is a composite result of tv	PALE YELLOW/ORANGE MASTIC UNDER GREY CARPET, PAPER - 1900B FLOOR, THRESHOLD	Gray Fibrous Homogeneous	60% Cellulose	20% Matrix 12% Non-fibrous (Other)	8% Chrysotile
26.1909-Mastic 1	PALE YELLOW/ORANGE MASTIC UNDER GREY CARPET, PAPER - 1900B FLOOR, THRESHOLD	Yellow Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected
26.1909-Mastic 2 092313026-0009B	PALE YELLOW/ORANGE MASTIC UNDER GREY CARPET, PAPER - 1900B FLOOR, THRESHOLD	Yellow/Orange Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected
26.1909-Mastic 3	PALE YELLOW/ORANGE MASTIC UNDER GREY CARPET, PAPER - 1900B FLOOR, THRESHOLD	Orange Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected
26.1910-Paper Flooring 092313026-0010	PALE YELLOW/ORANGE MASTIC UNDER GREY CARPET, PAPER - 1900B FLOOR, THRESHOLD	Gray Fibrous Homogeneous	60% Cellulose	20% Matrix 12% Non-fibrous (Other)	8% Chrysotile
This is a composite result of tv					
26.1910-Mastic 1 092313026-0010A	PALE YELLOW/ORANGE MASTIC UNDER GREY CARPET, PAPER - 1900B FLOOR, THRESHOLD	Tan/Yellow Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected

Initial report from: 06/20/2023 18:45:59



**EMSL Order:** 092313026 **Customer ID:** MECA62 **Customer PO:** SAF05302302

Project ID:

#### Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		<u>Asbestos</u>	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type	
26.1910-Mastic 2 092313026-0010B	PALE YELLOW/ORANGE MASTIC UNDER GREY CARPET, PAPER - 1900B FLOOR, THRESHOLD	Orange Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected	
26.1911-Compound	GREY COMPOUND AND YELLOW MASTIC UNDER GREY CARPET - 1900B FLOOR, THRESHOLD	Gray Non-Fibrous Homogeneous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
26.1911-Mastic	GREY COMPOUND AND YELLOW MASTIC UNDER GREY CARPET - 1900B FLOOR, THRESHOLD	Yellow Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected	
26.1912-Compound 092313026-0012	GREY COMPOUND AND YELLOW MASTIC UNDER GREY CARPET - 1900B FLOOR, THRESHOLD	Gray Non-Fibrous Homogeneous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected	
26.1912-Mastic 092313026-0012A	GREY COMPOUND AND YELLOW MASTIC UNDER GREY CARPET - 1900B FLOOR, THRESHOLD	Yellow Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected	

Analyst(s)

Gavin Lee (4)
Matthew Wilson (21)

Cecilia Yu, Laboratory Manager or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 60/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc San Leandro, CA NVLAP Lab Code 101048-3, WA C884

Initial report from: 06/20/2023 18:45:59



# Asbestos Chain of Custody EMSL Order Number (Lab Use Only): # 0 9 2 3 1 2 8 5 5

EMSL ANALYTICAL, INC. 464 McCormick Street SAN LEANDRO, CA 94577

PHONE: (510) 895-3675 FAX: (510) 895-3680

Company: Millennium Consulting Associates			EMSL-Bill to:   Same □ Different  If Bill to is Different note instructions in Comments**			
Street: 4683 Chabot Drive, Suite 380  City: Pleasanton State/Province: CA			Third Party Billing requires written authorization from third party  Zip/Postal Code: 94588 Country: USA			
City: Pleasanton  Report To (Name): Je		TOVINCE, GA	Fax #: (925) 808-6708	000	uy.	
Telephone #: (925) 80		Shirt.		@mecaenviro.com	100	
Project Name/Numbe		acman Quildi	ng Finish Refres	Sh	40446	
Please Provide Resu	Its: Fax Ema	il Purchase Order	: SAF03302302U.S	S. State Samples Take	n: California	
*For TEM Air 3 hours/6 ho	Hour 24 Hour	naround Time (TAT)  48 Hour  hedule *There is a premiu	Options* - Please Chec	ck 6 Hour 1 1 Week ERA or EPA Level II TAT. Y	2 Week	
PCM - Air			5hr TAT (AHERA only)	TEM- Dust	2000	
☐ NIOSH 7400		☐ AHERA 40 CF	R, Part 763	☐ Microvac - ASTM [	THE RESERVE OF THE PARTY OF THE	
w/ OSHA 8hr. TWA		☐ NIOSH 7402		☐ Wipe - ASTM D648		
PLM - Bulk (reporting		☐ EPA Level II		Carpet Sonication		
PLM EPA 600/R-93/1	HOMEROS PROGRAM CONTRACTOR OF CO.	TEM - Bulk		Soil/Rock/Vermiculit		
Point Count	70)	☐ TEM EPA NOB	398	☐ PLM CARB 435 - E		
□ 400 (<0.25%) □ 10	000 (<0.1%)	☐ NYS NOB 198.4	(non-friable-NY)	☐ TEM CARB 435 - B		
Point Count w/Gravime		☐ Chatfield SOP		☐ TEM CARB 435 - 0	C (0.01% sensitivity)	
400 (<0.25%) 10	St. St. Steel St.		ysis-EPA 600 sec. 2.5	☐ EPA Protocol (Sen		
NYS 198.1 (friable	5.115. 50.121.101.00	TEM - Water: EPA				
☐ NYS 198.6 NOB (n		Fibers >10µm				
☐ NIOSH 9002 (<1%)			Waste Drinking	noue Group		
Samplers Name: Sarah Anderson Flores Samplers Signature: Sulle Chunffe					Fr	
Sample #		Sample Description		Volume/Area (Air) HA # (Bulk)	Date/Time Sampled	
26.201	Drywall Rr	12200	land action on the	HA2-1	5/30/23	
26.202	Organi R	m for Copy	maeline	MA2-1	1	
24.203	Dry wall of	um 2600 B		HA2-1		
26.204	light Tan Red	ober case be	use, tan mastic	HA2-2		
26.205	V	RM	2200	1+A2-2		
26.206				HA2-2		
26.207	Copy room			HA2-2		
2.208		per cove los	use, fan Mastic	HA2-3	1	
Client Sample # (s):	26.20	01 - 20	2.221	Total # of Samples:	21	
Relinquished (Client):	Dioc Curry	Date:	06/09/23	Time:	5:30PM	
	m EFX (S)	Date:	06122023-	0 8 4 5 Time:	-	
Comments/Special Instructions: PO: 8AF03302303 48 HR TAT						

Controlled Document - Asbestos COC - R2 - 1/12/2010

Page 1 of 2 pages

DocuSign Envelope ID: 90E41B67-16B4-4BFE-B395-928AF7888F9F PO: 8AF03302303 #092312855 DATE TOPIC UCDM Sherman Building Finish Refresh Sample # Date Sampled Sample Description HA# 26.209 Brown Rubber cove brese 5/30/23 HA 2-3\_ tan mastic, copy Room 26.210 Purple / grey specs vc+ + mastic. HA2-4 Purple/grey specs UCT + mastic 1702-4 26.211 Light Pink/grey specs UCT + mastic. HA2-5 26.212 26.213 Light Pink/grey specs UCT + mostic HAZ-S 20.214 Dark Grey carpet tiles, cubicle, yellow HAZ-G massic 26.215 1+A2-6 Blue / grey carpet RM 2600B, yellow 26.216 HA2-7 mastic RM 2600B 24.217 26.218 Hall 26-219 26.220 HA2-8 Blue Patches, yellow mastic RM 2200 office Hall next to RM 2200 26.221 Page 2 of 2 pages on EFX O 0 6 1 2 2 0 2 3 - 0 8 4 5



# **EMSL** Analytical, Inc.

464 McCormick Street San Leandro, CA 94577

Tel/Fax: (510) 895-3675 / (510) 895-3680 http://www.EMSL.com / sanleandrolab@emsl.com EMSL Order: 092312855
Customer ID: MECA62
Customer PO: SAF03302303

Project ID:

Attention: Jenice Feiner

Millennium Consulting Associates, Inc.

4683 Chabot Drive, Suite 380

Pleasanton, CA 94588

Phone: Fax:

Received Date: 06/12/2023 8:45 AM

Analysis Date: 06/15/2023

Collected Date: 05/30/2023

Project: UCDM SHERMAN BUILDING FINISH REFRESH

# Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-As	sbestos	<u>Asbestos</u>
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
26.201-Drywall	DRYWALL RM 2200	White Non-Fibrous		80% Gypsum 20% Non-fibrous (Other)	None Detected
092312855-0001		Homogeneous			
26.201-Joint Compound	DRYWALL RM 2200	White Non-Fibrous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected
092312855-0001A		Homogeneous			
26.202-Drywall	DRYWALL RM FOR COPY MACHINE	White Non-Fibrous		80% Gypsum 20% Non-fibrous (Other)	None Detected
092312855-0002		Homogeneous			
26.202-Joint Compound	DRYWALL RM FOR COPY MACHINE	White Non-Fibrous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected
092312855-0002A		Homogeneous			
26.203-Drywall	DRYWALL RM 2600B	White Non-Fibrous		80% Gypsum 20% Non-fibrous (Other)	None Detected
092312855-0003		Homogeneous			
26.203-Joint Compound	DRYWALL RM 2600B	White Non-Fibrous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected
092312855-0003A	LIGHT TAN BURDED	Homogeneous		000/ 14 / :	N 5
26.204-Cove Base	LIGHT TAN RUBBER COVE BASE, TAN MASTIC	Tan Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected
	LIGHT TAN RUBBER	Yellow		80% Matrix	None Detected
26.204-Mastic	COVE BASE, TAN MASTIC	Non-Fibrous Homogeneous		20% Non-fibrous (Other)	None Detected
26.204-Compound 1	LIGHT TAN RUBBER	White		80% Ca Carbonate	None Detected
20.204-Compound 1	COVE BASE, TAN MASTIC	Non-Fibrous Homogeneous		20% Non-fibrous (Other)	Notice Detected
26.204-Compound 2	LIGHT TAN RUBBER	White		80% Gypsum	None Detected
092312855-0004C	COVE BASE, TAN MASTIC	Non-Fibrous Homogeneous		20% Non-fibrous (Other)	None Detected
26.205-Mastic	LIGHT TAN RUBBER	Yellow		80% Matrix	None Detected
092312855-0005	COVE BASE, TAN MASTIC - RM 2200	Non-Fibrous Homogeneous		20% Non-fibrous (Other)	None Beleated
26.205-Compound	LIGHT TAN RUBBER COVE BASE, TAN	White Non-Fibrous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected
092312855-0005A	MASTIC - RM 2200	Homogeneous			
26.205-Cove Base	LIGHT TAN RUBBER COVE BASE, TAN				Layer Not Present
092312855-0005B	MASTIC - RM 2200				
26.206-Cove Base	LIGHT TAN RUBBER COVE BASE, TAN	Tan Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0006	MASTIC - RM 2200	Homogeneous			
26.206-Mastic	LIGHT TAN RUBBER COVE BASE, TAN	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0006A	MASTIC - RM 2200	Homogeneous			
26.206-Compound 1	LIGHT TAN RUBBER COVE BASE, TAN	White Non-Fibrous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected
092312855-0006B	MASTIC - RM 2200	Homogeneous			

Initial report from: 06/15/2023 14:17:53



**EMSL Order:** 092312855 Customer ID: MECA62 Customer PO: SAF03302303

Project ID:

## Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

Cample	Description	Appearance	<u>Non-A</u> % Fibrous	sbestos % Non-Fibrous	Asbestos
Sample	Description	• • • • • • • • • • • • • • • • • • • •	% FIBROUS		% Type
26.206-Compound 2 092312855-0006C	LIGHT TAN RUBBER COVE BASE, TAN MASTIC - RM 2200	White Non-Fibrous Homogeneous		80% Gypsum 20% Non-fibrous (Other)	None Detected
26.207-Mastic	LIGHT TAN RUBBER COVE BASE, TAN MASTIC - RM 2200	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0007 26.207-Compound	LIGHT TAN RUBBER COVE BASE, TAN	Homogeneous White Non-Fibrous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected
092312855-0007A 26.207-Cove Base	MASTIC - RM 2200 LIGHT TAN RUBBER COVE BASE, TAN	Homogeneous			Layer Not Present
092312855-0007B 26.208-Cove Base	MASTIC - RM 2200 BROWN RUBBER COVE BASE, TAN	Brown Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0008	MASTIC - COPY ROOM	Homogeneous		20% Noti-fibrous (Other)	
26.208-Mastic	BROWN RUBBER COVE BASE, TAN MASTIC - COPY ROOM	Yellow Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected
26.208-Compound 1	BROWN RUBBER COVE BASE, TAN MASTIC - COPY ROOM	White Non-Fibrous Homogeneous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected
26.208-Compound 2	BROWN RUBBER COVE BASE, TAN	White Non-Fibrous		80% Gypsum 20% Non-fibrous (Other)	None Detected
092312855-0008C	MASTIC - COPY ROOM	Homogeneous			
26.209-Cove Base	BROWN RUBBER COVE BASE, TAN MASTIC - COPY ROOM	Brown Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected
26.209-Mastic	BROWN RUBBER COVE BASE, TAN MASTIC - COPY ROOM	Yellow Non-Fibrous Homogeneous		80% Matrix 20% Non-fibrous (Other)	None Detected
26.209-Compound	BROWN RUBBER COVE BASE, TAN MASTIC - COPY ROOM	White Non-Fibrous Homogeneous		80% Ca Carbonate 20% Non-fibrous (Other)	None Detected
26.210-VCT 092312855-0010	PURPLE/GREY SPECS VCT + MASTIC	Brown/Gray/Purple Non-Fibrous Homogeneous		5% Quartz 15% Ca Carbonate 60% Matrix 20% Non-fibrous (Other)	None Detected
26.210-Mastic	PURPLE/GREY SPECS VCT +	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0010A	MASTIC PURPLE (CREY	Homogeneous		50/ Out 1-	Mana District
26.211-VCT 092312855-0011	PURPLE/GREY SPECS VCT + MASTIC	Gray/Purple Non-Fibrous Homogeneous		5% Quartz 15% Ca Carbonate 60% Matrix 20% Non-fibrous (Other)	None Detected
26.211-Mastic	PURPLE/GREY SPECS VCT +	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0011A	MASTIC	Homogeneous			
26.212-VCT 092312855-0012	LIGHT PINK/GREY SPECS VCT + MASTIC	Gray/Purple Non-Fibrous Homogeneous		5% Quartz 15% Ca Carbonate 60% Matrix 20% Non-fibrous (Other)	None Detected

Initial report from: 06/15/2023 14:17:53



EMSL Order: 092312855
Customer ID: MECA62
Customer PO: SAF03302303

Project ID:

### Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-As	Asbestos	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
26.212-Mastic	LIGHT PINK/GREY SPECS VCT +	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0012A	MASTIC	Homogeneous			
26.213-VCT 092312855-0013	LIGHT PINK/GREY SPECS VCT + MASTIC	Gray/Pink Non-Fibrous Homogeneous		5% Quartz 15% Ca Carbonate 60% Matrix	None Detected
26.213-Mastic	LIGHT PINK/GREY SPECS VCT + MASTIC	Yellow Non-Fibrous Homogeneous		20% Non-fibrous (Other) 80% Matrix 20% Non-fibrous (Other)	None Detected
26.214	DARK GREY CARPET TILES,	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0014	CUBICLE, YELLOW MASTIC	Homogeneous			
26.215	DARK GREY CARPET TILES,	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0015	CUBICLE, YELLOW MASTIC	Homogeneous			
26.216	BLUE/GREY CARPET TILES,	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0016	CUBICLE, YELLOW MASTIC, RM 2600B	Homogeneous			
26.217	BLUE/GREY CARPET TILES,	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0017	CUBICLE, YELLOW MASTIC, RM 2600B	Homogeneous		,	
26.218	BLUE/GREY CARPET TILES,	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0018	CUBICLE, YELLOW MASTIC, HALL	Homogeneous		,	
26.219	BLUE/GREY CARPET TILES,	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0019	CUBICLE, YELLOW MASTIC, HALL	Homogeneous		20% 1.01. 1.21.000 (0.01.0.)	
26.220	BLUE PATCHES, YELLOW MASTICS,	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0020	RM 2200 OFFICE	Homogeneous		, ,	
26.221	BLUE PATCHES, YELLOW MASTICS,	Yellow Non-Fibrous		80% Matrix 20% Non-fibrous (Other)	None Detected
092312855-0021	HALL NEXT TO RM 2200	Homogeneous		20% Holl-librous (Othor)	

Analyst(s)		
Stacy Trinh L	e (41)	

Cecilia Yu, Laboratory Manager or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc San Leandro, CA NVLAP Lab Code 101048-3, WA C884

Initial report from: 06/15/2023 14:17:53



# Asbestos Chain of Custody EMSL Order Number (Lab Use Only):

**他09231284** 

EMSL ANALYTICAL, INC. 464 McCormick Street SAN LEANDRO, CA 94577

PHONE: (510) 895-3675 FAX: (510) 895-3680

Company: Millennium Consulting Associates			EMSL-Bill to: ☒ Same ☐ Different If Bill to is Different note instructions in Comments**			
Street: 4683 Chabot Drive, Suite 380			Third Party Billing requires written authorization from third party			
City: Pleasanton State/Province: CA			Zip/Postal Code: 94588 Country: USA			
Report To (Name): Je	enice Feiner		Fax #: (925) 808-6708			
Telephone #: (925) 80	08-6700		Email Address: jfeiner	r@mecaenviro.com	and the second	
Project Name/Number		n Sherman Bld		sh (3nd Floor	-)	
Please Provide Resul			r: 84F03302304 U.S			
	Haur I 🗆 a	Turnaround Time (TAT)			☐ 2 Week	
	- Louiside	44 Hour 48 Hour and to schedule. *There is a premiu				
an authorization for		Analysis completed in accordance	e with EMSL's Terms and Con	nditions located in the Analys		
PCM - Air			.5hr TAT (AHERA only)	TEM- Dust		
□ NIOSH 7400		☐ AHERA 40 CF	R, Part 763	☐ Microvac - ASTM		
w/ OSHA 8hr. TWA		☐ NIOSH 7402		☐ Wipe - ASTM D64		
PLM - Bulk (reporting	Discourage of the last of the	☐ EPA Level II		☐ Carpet Sonication		
MPLM EPA 600/R-93/1	Marie Committee	☐ ISO 10312		Soil/Rock/Vermiculi		
☐ PLM EPA NOB (<19	%)	TEM - Bulk		PLM CARB 435 -		
Point Count		☐ TEM EPA NOB		PLM CARB 435 -		
☐ 400 (<0.25%) ☐ 10	The second second	☐ NYS NOB 198.	4 (non-friable-NY)	TEM CARB 435 -		
Point Count w/Gravime	0.000	☐ Chatfield SOP		☐ TEM CARB 435 - C (0.01% sensitivity)		
☐ 400 (<0.25%) ☐ 10	a confirmer		☐ TEM Mass Analysis-EPA 600 sec. 2.5		mi-Quantitative)	
☐ NYS 198.1 (friable	in NY)	TEM - Water: EPA	TEM - Water: EPA 100.2		antitative)	
■ NYS 198.6 NOB (n	on-friable-NY)		Fibers >10µm ☐ Waste ☐ Drinking			
■ NIOSH 9002 (<1%)	)	All Fiber Sizes	All Fiber Sizes Waste Drinking			
	☐ Checl	k For Positive Stop – Cle	early Identify Homoge	enous Group		
Samplers Name:	Suluda	Ph	Samplers Signature:	Sarah And	erson-Flores	
Sample #		Sample Description	n	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled	
26.301	Ceiling	tile 3rd F	loor reception	(+A 3-1	5/30/23	
26.302	Ceiling	tile 3 Rd. P	Loor Reception	AA3-1	1	
Edit Land	0	,	The same of			
ave a						
		7				
				1.516		
			-0. 11.30			
			9			
Client Sample # (s):		26.301 -20	1.302	Total # of Samples:	2	
Chefft Sample # (s).						
Relinquished (Client)	: Buller	Date:	06/09/23		: 5:30 pm	
	1000000	Date:	06/09/23	3 - 0 8 4 5	TO THE PARTY OF TH	
Relinquished (Client)	Structions:	Date:  Date:  SAF03302304			TO THE PARTY OF TH	

Controlled Document - Asbestos COC - R2 - 1/12/2010

Page 1 of \_\_\_\_ pages



# **EMSL Analytical, Inc.**

464 McCormick Street San Leandro, CA 94577

Tel/Fax: (510) 895-3675 / (510) 895-3680 http://www.EMSL.com / sanleandrolab@emsl.com EMSL Order: 092312846
Customer ID: MECA62
Customer PO: SAF03302304

Project ID:

Attention: Jenice Feiner

Millennium Consulting Associates, Inc.

4683 Chabot Drive, Suite 380

Pleasanton, CA 94588

Phone: Fax:

Received Date: 06/12/2023 8:45 AM

**Analysis Date:** 06/14/2023

Collected Date: 05/30/2023

Project: UCOM SHERMAN BLDG FINIS REFRESH (3RD FLOOR) - SAF03302304

#### Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

		Non-Asbestos			<u>Asbestos</u>	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type	
26.301	CEILING TILE, 3RD	Gray	40% Cellulose	10% Perlite	None Detected	
092312846-0001	FLOOR RECEPTION	Fibrous Homogeneous	15% Min. Wool	35% Non-fibrous (Other)		
26.302	CEILING TILE, 3RD	Gray	40% Cellulose	10% Perlite	None Detected	
	FLOOR RECEPTION	Fibrous	15% Min. Wool	35% Non-fibrous (Other)		
092312846-0002		Homogeneous				

Ana	yst	(s	)

Stacy Trinh Le (2)

Cecilia Yu, Laboratory Manager or Other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc San Leandro, CA NVLAP Lab Code 101048-3, WA C884



# Lead (Pb) Chain of Custody EMSL Order ID (Lab Use Only):

EMSL ANALYTICAL, INC. 464 McCormick Street San Leandro, CA 94577 PHONE: (510) 895-3675

FAX: (510) 895-3680

						F	MSL-Bill	to:X	Same	Different		
Company :	Millennium Consulting Associates			EMSL-Bill to: Same Different  If Bill to is Different note instructions in Comments**								
Street: 4683 Chabot Drive, Ste. 380				Third Party Billing requires written authorization from third party								
				Zip/Postal Code: 94621 Country:								
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	,								+			X
Air				NIOSH 7082		Flame A	Atomic Ab	sorption		4 μg/filter	28	
				NIOSH 7105			nite Furna		_	03 µg/filte		
1.00	10.17			H 7300 mod			-AES/ICP			.5 μg/filte		
Wipe*	ASTM non ASTM			W846-7000E		Flame Atomic Absorption			0 µg/wipe			
*if no box i	s checked, non-ASTM	П	SW8	346-6010B o	or C	ICP-AES		1.	0 µg/wipe	9		
	Wipe is assumed		SW8	46-7000B/7	010	Graphite Furnace AA		0.0	0.075 µg/wipe			
TCLP			SW846-1311/7000B/SM 3111B		Flame Atomic Absorption			0.4 mg/L (ppm)				
Call			SW846-1131/SW846-6010B or C		ICP-AES		0.1 mg/L (ppm)					
Soil			SW846-7000B		Flame Atomic Absorption Graphite Furnace AA		40 mg/kg (ppm)					
			SW846-7010 SW846-6010B or C		ICP-AES			0.3 mg/kg (ppm) 2 mg/kg (ppm)		$\vdash$		
			SM3111B/SW846-7000B		Flame Atomic Absorption			0.4 mg/L (ppm)				
Wastewater	Unpreserved		EPA 200.9		Graphite Furnace AA			3 mg/L (pp				
Preserved w	ith HNO₃ pH < 2	П	EPA 200.7		ICP-AES			0.020 mg/L (ppm)				
	ter Unpreserved		EPA 200.9		Graphite Furnace AA		_	0.003 mg/L (ppm)				
Preserved w	ith HNO <sub>3</sub> pH < 2		EPA 200.8		ICP-MS		0.00	0.001 mg/L (ppm)				
TSP/SPM Fil	ter		40 CFR Part 50		ICP-AES			12 µg/filter				
Other:			40 CFR Part 50		Graphite Furnace AA		3.6 µg/filter					
		_		<i>+</i> ,		100		-	1,	,		
Name of San	npler: Sarati		lerson	-Hwre	ろ Signa	ture of S			ulle	mo	n	
Sample #		Location		1.330	4	- mile s	me/Are	a		Date/T	ime S	Sampled
26.001	Off-White p	oaint,	2nd Fle	200	2	2 inch	esz			05/2	30/2	23
26.POZ	Off-White					2102					1	
20.po3												
26. PO\$	Off-white paint, 1st Floor, 1900		_		1							
GPE-	J.	-								Sie		
Client Sampl	e #'s 26.901	- 20	. PO4			100	Tota	I # of S	amples	. 4		
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Controlled Document --- Lead (Pb) COC - R6- 5/12/2012



## **EMSL Analytical, Inc**

464 McCormick Street, San Leandro, CA 94577 (510) 895-3675 / (510) 895-3680

http://www.EMSL.com sanleandrolab@emsl.com EMSL Order: 092312791 CustomerID: MECA62 CustomerPO: SAF05302305

ProjectID:

**Sarah Anderson-Flores** 

Millennium Consulting Associates, Inc. 4683 Chabot Drive, Suite 380

Pleasanton, CA 94588

Phone: (925) 808-6700

Fax:

Received: 6/12/2023 08:45 AM

Collected: 5/30/2023

Project: SAF05302305 / UCDM SHERMAN BLDG

# Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\*

Client Sample Description	Lab ID (	Collected	Analyzed	Weight	Lead <b>Concentration</b>
26.PO1	092312791-0001 5	5/30/2023	6/12/2023	0.2529 g	<80 ppm
	Site: OFF-WHITE	PAINT, 2N	D FLOOR		
26.PO2	092312791-0002 5	/30/2023	6/12/2023	0.2505 g	<80 ppm
	Site: OFF-WHITE	PAINT, 2N	D FLOOR		
26.PO3	092312791-0003 5	5/30/2023	6/12/2023	0.2512 g	<80 ppm
	Site: OFF-WHITE	PAINT, 1S	T FLOOR, 1700B		
26.PO4	092312791-0004 5	/30/2023	6/12/2023	0.251 g	<80 ppm
	Site: OFF-WHITE	PAINT, 1S	T FLOOR, 1900		

Cecilia Yu. Laboratory Manager or other approved signatory

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specifications unless one was enoted.

\*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request. Samples analyzed by EMSL Analytical, Inc San Leandro, CA AIHA LAP, LLC-ELLAP Accredited #101748

Initial report from 06/12/2023 16:09:03

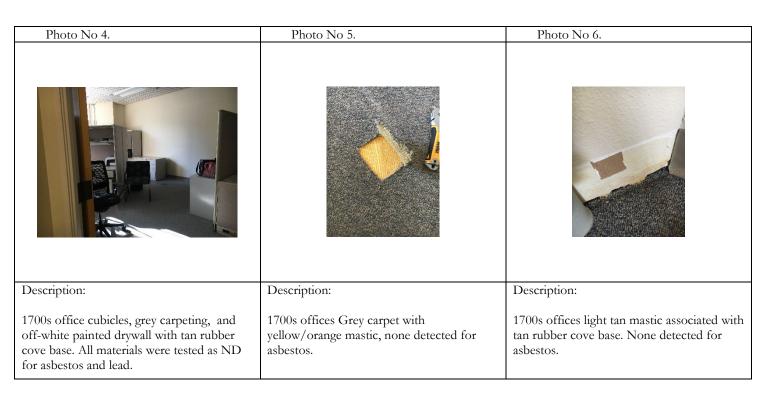


Project Name:

Sherman Building Finish Refresh

Site Location: UC Davis Health Sherman Building Sacramento, CA Millennium Project No. 21014.2017 M057298



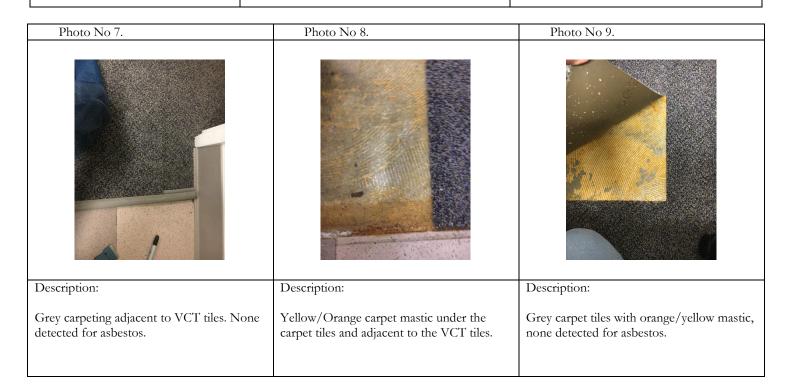




Project Name:

Sherman Building Finish Refresh

Site Location: UC Davis Health Sherman Building Sacramento, CA Millennium Project No. 21014.2017 M057298







Project Name:

Sherman Building Finish Refresh

Site Location: UC Davis Health Sherman Building Sacramento, CA Millennium Project No. 21014.2017 M057298



Photo No 16.	Photo No 17.	Photo No 18.
		2008 Gin Mediyan
Description:	Description:	Description:
Grey rubber cove base with tan mastic.	2 <sup>nd</sup> floor carpet tiles with yellow mastic, ND for asbestos.	2 <sup>nd</sup> floor private office 2600B has blue carpet with no mastic, it's nailed in.



Project Name:

Sherman Building Finish Refresh

Site Location: UC Davis Health Sherman Building Sacramento, CA Millennium Project No. 21014.2017 M057298

Photo No 19.	Photo No 20.	Photo No 21.
Description:	Description:	Description:
2600B room with blue carpeting, no mastic present.	2 <sup>nd</sup> floor 2600B office with blue carpet is nailed in and no mastic on concrete subflooring.	Tile carpeting 2 <sup>nd</sup> floor has yellow mastic next to tan cove base with tan mastic.

Photo No 22.	Photo No 23.	Photo No 24.
Description:	Description:	Description:
2 <sup>nd</sup> floor copy room VCT dark and light greys with specs and yellow mastic. None detected asbestos. Brown cove base with tan mastic also ND for asbestos.	Pale blue carpeting in private office 2 <sup>nd</sup> floor.	No mastic under pale blue carpeting in private office of 2 <sup>nd</sup> floor. Nailed in over padding, over the concrete subfloor.



Project Name:

Sherman Building Finish Refresh

Site Location: UC Davis Health Sherman Building Sacramento, CA Millennium Project No. 21014.2017

M057298

Photo No 25.	Photo No 26.	Photo No 27.
Description:	Description:	Description:
Dark grey carpet tiles in cubicles of 2 <sup>nd</sup> floor with yellow mastic, ND for asbestos.	Yellow mastic under dark grey tiles of 2 <sup>nd</sup> floor cubicles.	3 <sup>rd</sup> floor reception ceiling tile, ND for asbestos.

Photo No 28.	Photo No 29.	Photo No 30.
Description:	Description:	Description:
Halls of 2 <sup>nd</sup> floor with grey carpet and tan rubber cove base. The corner guards are drilled in installations into the drywall.	2200 connecting hallway with grey carpet tiles.	2 <sup>nd</sup> floor offices with grey carpet tiles.

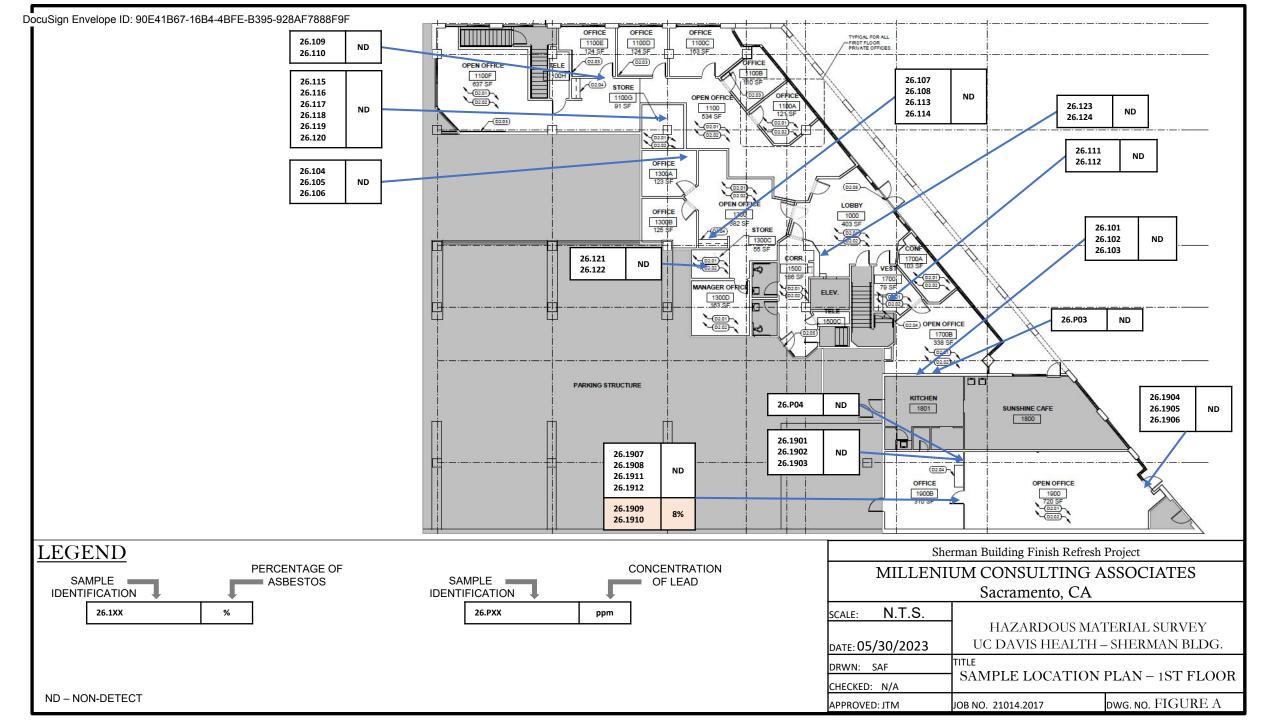


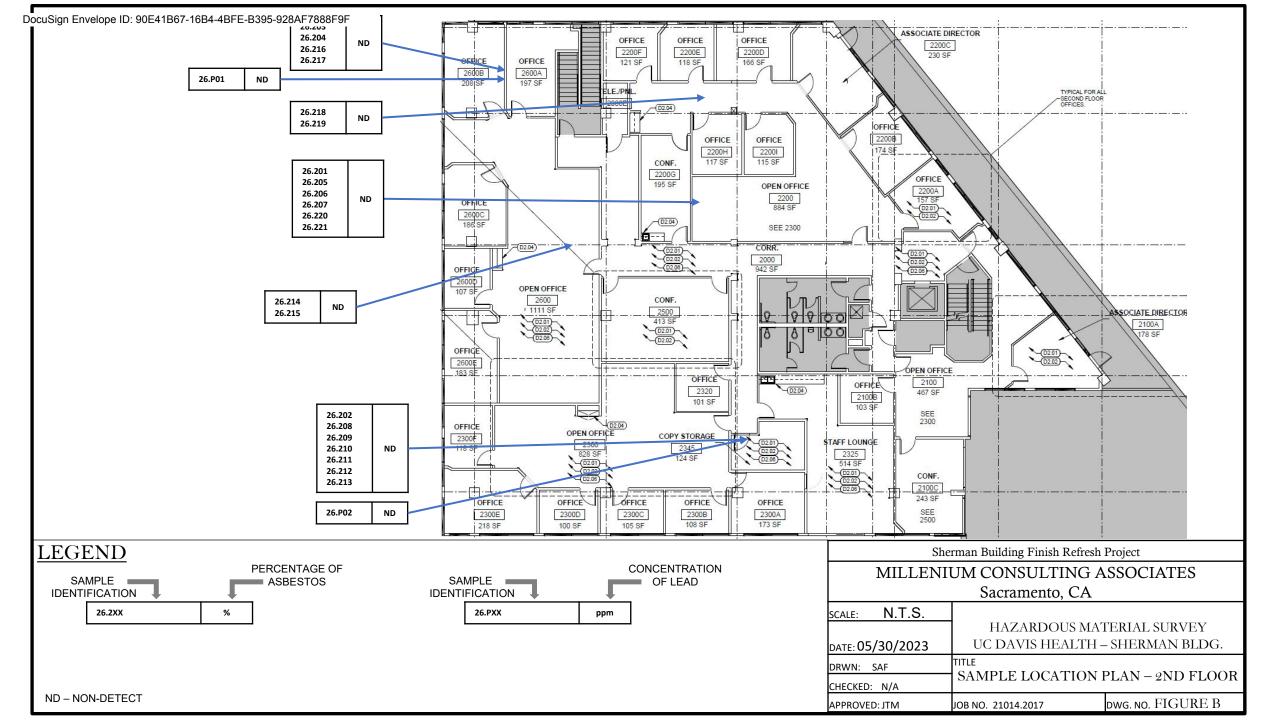
Project Name:

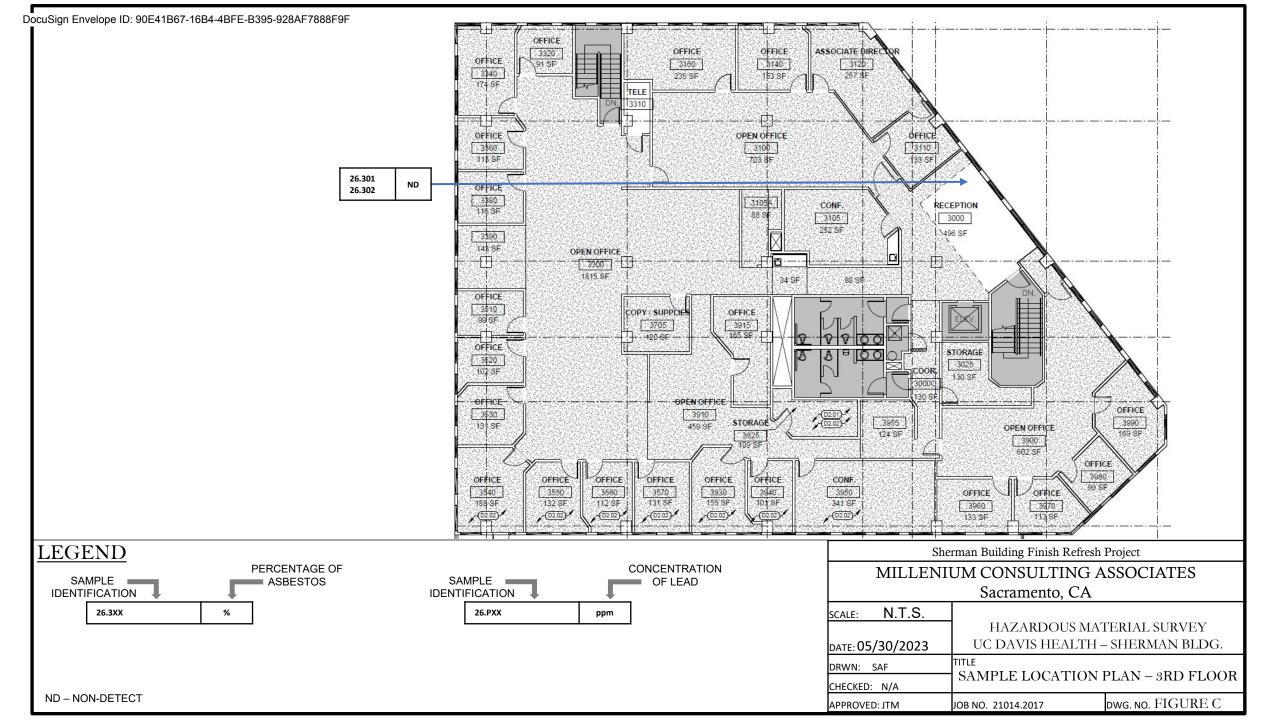
Sherman Building Finish Refresh

Site Location: UC Davis Health Sherman Building Sacramento, CA Millennium Project No. 21014.2017 M057298

Photo No 31.	Photo No 32.	Photo No 33.
Description:	Description:	Description:
Halls of 2 <sup>nd</sup> floor with grey carpet and tan rubber cove base. The corner guards are drilled in installations into the drywall.	2200 connecting hallway with grey carpet tiles.	2 <sup>nd</sup> floor offices with grey carpet tiles.







## **TABLE OF CONTENTS**

SECTION NO.	TITLE	PAGES
000000	Cover Sheet	1
000001	Signature Page	1
001100	Table of Contents	1
011100	Summary of the Work	3
011400	Work Restrictions.	4
$\sim$		
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012500	Clarification/Information Procedures	4
012550	Contract Modification Procedures	6
012900	Measurement and Payment	6
013100	Coordination	12
013200	Contract Schedules	11
013220	Construction Progress Reporting	2
013300	Shop Drawings, Product Data and Samples	6
013400	Contractor(s) Emergency Procedures	2
013500	Special Procedures	4
	ILSM Criteria and Daily Log Template	1
	ILSM Impact Worksheet	2
	ILSM Requirement Verification Card	1
013900	Green Building Policy Implementation	10
014100	Regulatory Requirements	5
014200	References	
014500	Quality Control	7
014520	Seismic Control – Non-HCAI	5
014550	Inspection and Testing of Work	11
015100	Temporary Utilities	7
015200	Construction Facilities	
015500	Vehicular Access and Parking	3
015600	Temporary Barriers, Enclosures and Controls	7
015610	Airborne Contaminants Control	
	ICRA Form	
016100	Product Requirements	
017300	Cutting and Patching	
017400	Cleaning	
017600	Protecting of Existing and Installed Construction	
017700	Closeout Procedures	
017800	Closeout Submittals	
020700	Selective Demolition	2
028213.19	Asbestos Related Work	24
		LL.
076240	Water Vapor Emission Control Barrier	
079200	Caulking and Sealants	
095100	Acoustical Tile Ceilings	
096510	Resilient Tile Flooring	
096530	Resilient Flooring Accessories	
096810	Carpet Tile	
099000	Painting	28

#### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. This section specifies the methods, procedures, and requirements related to the removal and disposal of Asbestos-Containing Material (ACM), Asbestos-Containing Construction Material (ACCM), and Asbestos-Containing Waste Material (ACWM) including, but not limited to:
  - 1. Regulatory requirements

4. Execution

2. Submittals

5. Inspections

3. Personal protective measures

6. Waste handling

- B. Related Sections:
  - 1. Asbestos-Related Sampling Report
  - 2. UC Davis Project Manual: Plans and Specifications

#### 1.2 SCOPE OF WORK

- A. The Work of this section includes the provision for all labor, materials, equipment, and services necessary to affect the preparation, removal, cleaning, and disposal of asbestos, ACM, and ACCM as indicated by the contract documents and this specification.
- B. The work of the contract can be summarized as follows:

The asbestos-related work for the UC Davis Project M057295 Sherman Building Finish Refresh project includes all pre-construction administration, submittal preparation, project planning, labor, transportation, and disposal as detailed herein, to conduct finish refresh to walls, and floors in the first and second levels and ceiling tile of the third level.

Work procedures for asbestos-containing material disturbance and removal are determined to be classified as Cal OSHA Class II asbestos work per CCR Title 8 Part 1529. This material is to be disposed of as RACM.

The reported asbestos-containing material consists of the following:

• An 8% concentration of chrysotile asbestos (ACM) was identified in the paper flooring layer located in the doorway threshold of the 1900B room. This paper flooring layer, possibly a former linoleum material or paper backing, is situated between a composite wood layer and the concrete subfloor/foundation. Above the paper flooring and composite wood layers, a blue/grey carpeting was observed as the finished floor. The removal of the asbestos material necessitates the use of Cal/OSHA-approved Class II methods CCR Title 8, Section 1529. Based on observations, it is estimated that this material is confined to rooms 1900 and 1900B, covering an approximate range of 310 to 1,030 square feet, and no instances of this asbestos-containing material were observed elsewhere in the building.

- This material is prone to becoming brittle and easily crumbled or pulverized with hand pressure. Dispose of this material as RACM (Regulated Asbestos-Containing Material) per 40 CFR Part 61, Subpart M.
- The SMAQMD Rule 902 requires prior notification 10 days before commencing any abatement work as this material is >1% ACM and is more than 160 square feet of removal. A licensed asbestos abatement contractor is required to perform the work of removing the RACM before any demolition activity disturbs the paper flooring layer.
- For details on analytical results refer to the pre-renovation survey report of June 2023.
- Quantity and Location: Review project plans to determine the quantity and location of floor finish removal.

#### 1.3 SUBMITTALS

- A. Personnel training: at the pre-construction meeting, the contractor shall submit (1) a declaration certifying all the contractor's employees have been adequately trained, and (2) a photocopy of training certificates, for each employee from their respective training agency or organization. Contractors may submit a photocopy of the employee's asbestos worker certification card in lieu of training certificates. All copies shall be legible and in color.
- B. Respirators: submit at pre-construction meeting certifications for each employee and clearly state that each employee has been fit tested and professionally trained for respirators.
- C. Medical examinations: submit proof that all persons providing labor and/or professional services who will be entering regulated areas while donning respirators have current (less than one year prior to the date of their participation on the project) medical examinations. Furnish the physician's written opinion to the owner's representative at the pre-construction meeting, or prior to each person's commencing work on this project, and for each person subsequently providing labor and/or professional services at the job site for whom a certificate was not initially furnished.
- D. Product submittals and substitutions: comply with pertinent provisions of applicable sections.
- E. Asbestos removal or encapsulation product data: within ten (10) days after the contractor has received the owner's notice of award, submit the manufacturer's catalog, samples, safety data sheets, (SDS), and other items needed to demonstrate fully the quality of the proposed materials. Under no circumstances shall proposed materials be used before written approval from the owner, owner's representative, or observation service. Submittals are required if the following materials are proposed (not necessarily a complete list). Do not submit data on products not proposed for this project:

1. Encapsulant

4. Lagging adhesive

2. Surfactant

5. Glovebags

3. Protective packaging

6. Solvents

F. Permits: submit at the pre-construction meeting proof satisfactory to the owner, owner's representative, or observation service that all required permits have been obtained.

- G. Waste compliance plan: submit ten (10) days before starting work a copy of the waste compliance plan which is in compliance with federal, state, and local hazardous waste regulations and addresses:
  - 1. Identification of hazardous waste streams, if any, associated with the work.
  - Sampling and analysis plan: should the contractor conduct additional waste characterization for disposal purposes, a plan detailing the following elements are required to be submitted and approved:
    - a. Identification of material(s): location, component, color, substrate;
    - b. Proposed sample collection methods to be employed;
    - Asbestos containing waste materials may not be commingled or composited prior to sampling;
    - d. Proposed analytical methods to be used;
    - e. Proposed analytical laboratory and associated qualifications; and
    - f. Proposed methods of data interpretation.
  - 3. Estimated quantities of wastes to be generated and disposed of.
  - 4. Names and qualifications of each contractor that will be transporting, storing, treating, and disposing of the wastes. Include the facility location and a 24-hour point of contact. Furnish two (2) copies of EPA, state, and local permit applications, permits, and EPA identification numbers.
  - 5. List of waste handling equipment to be used in performing the work, including cleaning, volume reduction, and transport equipment.
  - 6. Spill prevention, containment, and cleanup contingency measures to be implemented.
  - 7. Name of the EPA-approved hazardous waste treatment or disposal facility for asbestos disposal.
  - 8. Waste streams, excluding ACM, may be segregated, or commingled prior to waste characterization at the contractor's discretion. It may be to the contractor's benefit to segregate unique components known or suspected to contain elevated levels of lead.
    - a. Waste transportation: submit in the waste compliance plan the method of transport of hazardous waste, including the name, address, EPA ID number, and telephone number of the transporter(s).
    - b. Whenever possible, asbestos-containing waste material shall be segregated from other waste streams.
- H. The designated owner's representative shall inspect the waste and sign the uniform hazardous waste manifests and/or waste shipping record prior to transport and disposal. The designated owner's representative is the <u>only</u> person authorized to sign the manifest and shall retain the original last copy of the manifest. A copy of the land ban restriction notification or any required pertinent documentation must also be submitted in order to verify proper disposal.

- I. Asbestos Removal Plan: the contractor shall submit for approval at least ten (10) days prior to the start of work a detailed plan of the work procedures to be used in the removal, repair, clean-up, or encapsulation of materials containing asbestos. Such a plan shall include:
  - 1. Location of asbestos work areas.
  - 2. Layout and construction details of decontamination and enclosure systems.
  - 3. Project schedule including important milestones, critical paths, and interface of trades involved in the work.
  - 4. Personal air monitoring procedures.
  - 5. Detailed description of the method to be employed in order to prevent the spread of contamination, including negative air equipment calculations for all negative pressure enclosures.
  - 6. Infection Control Risk Assessment.
    - a. An Infection Control Risk Assessment (ICRA). This is required to mitigate dust and is mandatory for this project. The risk assessment identifies patient groups at risk for infection due to construction dust. The dust mitigation plan is designed to contain dust within the construction zone. Some hospitalized patients are fragile. These patients are at risk for acquiring infections from bacteria and viruses that are transported on air currents from the construction zone to the patient areas. Dust is a method for germs to move through the hospital. The ICRA and dust mitigation plan assures a clean, safe environment for the patients hospitalized during construction. Hospital management is expecting your assistance in providing the best possible environment for the patients. We appreciate your partnership in the campaign to prevent a hospital acquired infection related to construction dust.
  - 7. Names of a superintendent, supervisors (foremen), project manager, and other key personnel, and their daytime and emergency telephone numbers.
  - 8. Security plan including sketches necessary to clearly describe the plan.
  - 9. Emergency evacuation plan for injured workers, fire, and other emergencies. Include a list of emergency phone numbers and a route map to the nearest medical facility for emergency treatment.
  - 10. A contingency plan, in the event of a major contamination incident caused by fire (on or off the floor being abated), a large breach in the work area containment barrier, the opening of stairwell doors, breakage of the building's exterior windows, or sabotage. Such a plan will focus on how to maintain safety and order when the building is occupied by other trades or by the owner's personnel.
  - 11. Negative exposure assessment(s) (NEA): the contractor shall provide any NEA to be utilized on the project along with the required written determination and all air sampling data including laboratory results and the chain of custody or air sampling form used for the NEA. The NEA shall be compliant with the requirements of 8 CCR 1529.

- 12. The observation service and owner must approve the asbestos plan in writing at least 5 workdays before the start of any work.
- J. Equipment certification: submit at the pre-construction meeting manufacturers' certification that vacuums, negative air pressure equipment filters, and other local exhaust ventilation equipment conform to ANSI Z9.2.
- K. Rental equipment: when rental equipment is to be used in removal areas or to transport waste materials, a copy of the written notification provided to the rental company informing them of the nature of the use of the rented equipment shall be signed by the rental company and submitted to the observation service at the pre-construction meeting. The contractor shall submit a decontamination plan for the rental equipment that has been approved, in writing, by the rental company.
- L. Notifications: When required, contact the following government agencies in <u>writing</u> by certified/registered mail overnight mail service, or fax delivered at least ten (10) workdays prior to commencing any disturbance of asbestos:
  - 1. Sacramento Metropolitan Air Quality Management District
  - 2. California Division of Occupational Safety and Health

All notifications shall contain as a minimum the following information:

- a. Name, address, and telephone number of the owner including the contact person.
- b. Name, address, EPA numbers, license number, and telephone number of the contractor including the contact person.
- c. Name, address, and description of the building, including size, age, and prior use of the building.
- d. The type and quantity of friable asbestos material involved and the description of the work.
- e. Scheduled starting and completion dates for the asbestos-related work.
- f. Procedures that shall be employed to comply with the regulations.
- g. The name, address, EPA number, and telephone number of the transporter.
- h. The name and address of the asbestos waste disposal facility where the waste shall be deposited.
- M. Provide proof of contractor's C-22 license and asbestos certification from the contractor state licensing board, and proof of registration with the division of occupational safety and health in accordance with California Labor Code, Section 6501.
- N. Respiratory protection program: submit a copy of the contractor's current written respiratory protection program.

- O. Safety programs: on company letterhead, submit confirmation that the contractor has written safety programs for injury illness prevention (mandatory for all projects), hazard communication (mandatory for all projects), fall protection (when applicable), lockout/tag out (when applicable), and confined space (when applicable).
- P. Encapsulant manufacturer's certification (when required) that the contractor is an approved applicator of the encapsulants to be used on this project.
- Q. Where asbestos cement pipe is to be removed from exterior work areas the contractor shall submit documentation of, at a minimum, 4-hour asbestos cement pipe worker training from an accredited training provider.

#### 1.4 APPLICABLE REGULATIONS AND PUBLICATIONS

The publications listed below form a part of these specifications to the extent referenced. The publications are referred to in the text by the basic designation only.

- A. Federal Regulators and Regulations
  - 1. EPA Environmental Protection Agency
    - a. 40 CFR, Part 763, Subpart E AHERA
  - 2. OSHA Occupational Safety and Health Administration
    - a. 29 CFR 1926.1101 Asbestos Construction Standard
    - b. 29 CFR 1910.1001 Asbestos General Industry Standard
    - c. 29 CFR 1926 Construction Industry Standards
  - 3. NESHAPS National Emission Standards for Hazards Air Pollutants
    - a. 40 CFR 61, Subpart M Asbestos Emissions
    - b. 40 CFR 61, Subpart A General Conditions
  - 4. DOT Department of Transportation
    - a. 49 CFR 270-273
- B. State Regulators and Regulations
  - 1. Cal/OSHA California Department of Occupational Safety and Health
    - a. Title 8 CCR Section 1529 Construction Asbestos Standard
    - b. Title 8 CCR Section 3203 Injury and Illness Prevention
    - c. Title 8 CCR Section 5144 Respiratory Protection
    - d. Title 8 CCR Section 5158 Confined Space

- e. Title 8 CCR Section 5194 Hazard Communication
- f. Title 8 CCR Section 5208 General Industry Asbestos Standard
- g. Title 8 CCR Chapter 4 Subchapter 4 Construction Safety Orders
- 2. DTSC Department of Toxic Substance Control
  - a. Title 22 CCR Sections 66261.24, 66268.7, 66268.114
- 3. CIWMB California Integrated Waste Management Board
- 4. SWQCB State Water Quality Control Board CCR, Title 23
- 5. CSLB Contractor State Licensing Board
  - a. Business and Professional Code Section 7058.5
- C. Local Regulators and Regulations
  - 1. SMAQMD Sacramento Metropolitan Air Quality Management District
- D. National Reference Standards
  - 1. ANSI American National Standards Institute
    - a. Z9.2 Fundamentals Governing The Design and Operation of Local Exhaust Systems
    - b. Z88.2 Practices for Respiratory Protection
  - 2. NIOSH National Institute of Occupational Safety and Health
    - a. Method 7400 Asbestos and Other Fibers
    - b. Method 7402 Asbestos Fibers by TEM
  - 3. UL Underwriters Laboratories
    - a. 586 Standard for High Efficiency, Particulate, Air Filter Units

## 1.5 DEFINITIONS

- A. Owner: UC Davis Medical Center
- B. **Abatement**: Asbestos-related work procedures to control fiber release. Includes removal, disturbance, encapsulation, and enclosure.
- C. Adequately Wet: A term as defined in 40 CFR Part 61, Subpart M-, and EPA 340/1-90-019-that means to sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from ACM, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

- D. **Air Lock:** A system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area.
- E. **Air Monitoring**: The process of measuring the fiber content of a specific volume of air in a stated period.
- F. Air Sampling Professional: The professional contracted or employed to supervise air monitoring and analysis schemes. This individual is also responsible for the recognition of technical deficiencies in worker protection equipment and procedures during both the planning and on-site phases of an abatement project. Acceptable air sampling professionals include industrial hygienists, environmental engineers, and environmental scientists with equivalent experience in asbestos air monitoring and worker protection.
- G. **Amended Water**: Water to which a surfactant has been added.
- H. **Area Monitoring:** Sampling of airborne fiber concentrations within the asbestos work area and outside the asbestos work area which is representative of the airborne concentrations of asbestos fibers which may reach the breathing zone.
- I. **Asbestos:** (29 CFR 1926.1101 Definitions) Includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that have been chemically treated and/or altered.
- J. **Asbestos** (California Code of Regulations definitions): Means fibrous forms of various hydrated minerals including chrysotile, (fibrous serpentine), crocidolite (fibrous riebeckite), amosite (fibrous cummingtonite-grunerite), fibrous tremolite, fibrous actinolite, and fibrous anthophyllite.
- K. **Asbestos-Containing Material** (ACM) EPA definition: Material composed of asbestos of any type in an amount greater than 1 percent and by weight, either alone or mixed with other fibrous or nonfibrous materials.
- L. **Asbestos-Containing Construction Material (ACCM)** (California definition): Means any manufactured construction material, which contains more than 1/10th of 1% asbestos by weight.
- M. Asbestos-Containing Waste Material (ACWM): Any waste that contains or has been contaminated by commercial asbestos and is generated by a plant, source, or operation including, but not limited to, asbestos mill tailings, control device asbestos waste, RACM demolition, and renovation waste material, disposable equipment and clothing, and bags or containers that previously contained commercial asbestos.
- N. **Asbestos-Related Work:** Work that disturbs asbestos fibers or has the potential to release asbestos fibers into the air.
- O. **Authorized Visitor:** The owner's project team members, the owner's representative, observation service, and any representative of a regulatory or other agency having jurisdiction over the project.
- P. **Clean Room:** An uncontaminated area or room which is a part of the worker decontamination enclosure with provisions for the storage of workers' street clothes and protective equipment.

- Q. **Contained Work Area**: A work area that has been isolated, plasticized, and equipped with a decontamination enclosure system.
- R. **Curtained Doorway:** A device to allow ingress or egress from one area to another while permitting minimal air movement between the areas, typically constructed by placing three overlapping sheets of plastic over an existing or temporarily framed doorway, securing each along the top of the doorway, and securing the vertical edge of the outer two sheets along the opposite vertical side of the doorway.
- S. **Decontamination Enclosure System**: A series of connected rooms, with airlocks or curtained doorways between any two adjacent rooms, for the decontamination of workers and materials, and equipment. A decontamination enclosure system always contains at least one airlock to the work area.
- T. **Encapsulant**: A liquid material that can be applied to asbestos-containing material and which controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging encapsulant) or by penetrating the material and binding its components together (penetrating encapsulant).
- U. **Encapsulation**: All herein-specified procedures necessary to apply an encapsulant to asbestoscontaining materials to control the possible release of asbestos fibers into the ambient air.
- V. Enclosure: All herein-specified procedures necessary to enclose completely asbestoscontaining material behind airtight, impermeable barriers with a designed lifespan of twenty or more years.
- W. Excursion Limit: An exposure of airborne concentrations of asbestos fibers of one fiber per cubic centimeter of air (1f/cc) as averaged over a sampling period of thirty (30) minutes.
- X. **Equipment Room:** A contaminated area or room that is part of the worker decontamination enclosure with provisions for the storage of contaminated clothing and equipment.
- Y. **Equipment Decontamination Enclosure:** That portion of a decontamination enclosure system is designed for the controlled transfer of materials, waste containers, and equipment, typically consisting of a washroom and a waste loadout.
- Z. **Friable Asbestos Material** (40 CFR, Subpart M Definition): Material that contains more than one percent (1%) asbestos by weight and that can be broken, crumbled, pulverized, or reduced to powder by hand pressure when dry.
- AA. **Friable Asbestos Material** (California DTSC): Material that contains equal to or more than one percent (1%) asbestos by weight and that can be broken, crumbled, pulverized, or reduced to powder by hand pressure when dry.
- BB. **Fixed Object**: A unit of equipment or furniture or other building components that cannot be detached from the building or can only be detached by destructive methods resulting in irreparable damage to the item.
- CC. Glovebag Method: A method with limited applications for removing friable asbestoscontaining material from HVAC ducts, piping runs, valves, joints, elbows, and other nonplanar surfaces. The glovebag (typically constructed of six [6] mil transparent plastic) has two inward-projecting long-sleeve rubber gloves, one inward-projecting water wand sleeve, an

internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or area to be decontaminated and contains all asbestos fibers released during the removal process. All workers who are permitted to use the glovebag method must be highly trained, experienced, and skilled in this method.

- DD. **HEPA Filter**: A high-efficiency particulate air (HEPA) filter capable of trapping and retaining 99.97 percent of all monodispersed particles (asbestos fibers) equal to or greater than 0.3µ in mass median aerodynamic equivalent diameter.
- EE. **HEPA Vacuum Equipment:** Vacuuming equipment with a HEPA filter system.
- FF. Land Ban Notification: The notice and certification form for friable asbestos-containing waste certifying that the generator is aware of the regulations governing the disposal of RACM and that the designated waste is in compliance with Title 22 CCR Division 4.5 treatment requirements.
- GG. **Moveable Object:** A unit of equipment, furniture, or other building components that are detached or can be detached from the building without destructive methods or results.
- HH. **Negative Air Pressure Equipment:** A portable local exhaust system equipped with HEPA filtration and capable of maintaining a constant, low velocity air flow into contaminated areas from adjacent uncontaminated areas.
- II. Non-friable Asbestos-Containing Material: Material that contains more than one (1) percent Asbestos by weight in which the fibers have been locked in by a bonding agent, coating, binder, or other material so that the Asbestos is well bound and will not release fibers during any appropriate end-use, handling, demolition, storage, transportation, processing, or disposal. Also referred to as miscellaneous, Category I or Category II non-friable asbestos- containing material.
- JJ. **Observation Service:** The agent of the owner or the owner's representative who shall observe the work, perform tests, verify that abatement methods and procedures specified by the contract documents are being complied with, and report all observations and test results to the owner or the owner's representative.
- KK. **Permissible Exposure Limit (PEL):** An airborne concentration of asbestos equal to 0.10 fibers per cubic centimeter of air as an eight (8) hour time-weighted average (TWA), as determined by the method prescribed in Title 8, CCR 1529.
- LL. **Personal Monitoring:** Sampling of airborne fiber concentrations within the personal breathing zone of a worker.
- MM. **Plasticize:** To cover floors, walls, and other structural elements of a work area with NFPA-approved flame-resistant plastic sheeting as herein specified with all seams securely taped.
- NN. **Removal**: All procedures necessary to remove ACM or ACCM from the designated areas and to dispose of these materials at an acceptable site.
- OO. **Shower Room**: A room between the clean room and the equipment room in the worker decontamination enclosure with hot and cold running water, and suitably arranged for

- complete showering during decontamination. The shower room comprises an airlock between contaminated and clean areas.
- PP. **Surfactant:** A chemical wetting agent added to water to reduce surface tension and improve penetration.
- QQ. **Wet Cleaning:** The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with amended water (except where prohibited by safety concerns), and by afterward disposing of these cleaning tools as asbestos-contaminated waste.
- RR. Work Area (Also known as "Regulated Area"): Designated rooms, spaces, or areas of the project in which asbestos disturbance or removal actions are to be undertaken or which may become contaminated as a result of such abatement actions. Access to such regulated work areas is limited to appropriately trained and authorized personnel by use of signs, placards, barriers, and other similar devices.
- SS. Worker Decontamination Enclosure System: That portion of a Decontamination Enclosure System is designed for controlled passage of workers, other personnel, and authorized visitors, typically consisting of a clean room, a shower room, and an equipment room.

## 1.6 ADMINISTRATION OF THE CONTRACT

A. All work is to be performed under the scrutiny of the observation service and the owner's representative, who shall be free to review all work.

#### 1.7 SAFETY

- A. Submit at the pre-construction meeting written procedures for evacuation of injured workers. Aid for seriously injured workers shall not be delayed in order to comply with standard decontamination procedures. It is the responsibility of the contractor to decide if the seriousness of the injury warrants noncompliance with the standard decontamination procedures.
- B. The contractor shall have a comprehensive job safety meeting at the beginning of the project with the observation service in attendance. The contractor shall give 72 hours' notice of this job safety meeting. The contractor shall thereafter hold tail-gate safety meetings at a minimum once per week or as required by other Cal-OSHA regulations. The initial and continuing safety meetings shall be conducted in the primary language of its employees. If needed, more than one primary language presentation must occur. The contractor shall keep a record of the topics and people in attendance. Workers shall each sign an attendance sheet for each safety meeting.
- C. The contractor shall retain licensed and certified personnel to remove equipment from service, including electricians, plumbers, etc., as required. Such additional support personnel shall not engage in disturbing asbestos.

## 1.8 QUALITY CONTROL

A. Safety compliance: in addition to detailed requirements of this specification, comply with laws, ordinances, rules, and regulations of federal, state, regional, and local authorities, and

publications regarding handling, storing, transporting, and disposing of ACWM. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting the work. Where the requirements of this specification and referenced documents vary, the most stringent requirement shall apply. When requirements of reference documents vary, the most stringent requirement shall apply.

- B. Before the commencement of any work at the site, the contractor shall post bilingual (as appropriate) EPA and OSHA caution signs in and around the work area to comply with EPA and OSHA regulations.
- C. Area monitoring may be performed by the owner or the observation service at the discretion of the owner. Area monitoring may consist of one or more of the following air sampling activities: (1) at the perimeter of the work area, (2) at the work area entry or waste load-out, or (3) in the work area. If area monitoring results exceed regulatory standards the contractor shall be responsible for adjusting work practices and engineering controls to prevent future exceedances of air quality standards. Where requirements of this specification and regulatory standards vary, the most stringent requirement shall apply.
- D. Clearance testing may be performed at the discretion of the observation service. The Observation Service shall be notified at least 24 hours prior to completion of work inside a work area where clearance testing will be performed. The contractor shall not remove the work area enclosure or shut down engineering controls until written notification of clearance is received from the observation service or the owner. Clearance testing shall generally be performed in accordance with the following protocol; however, the protocol may be altered at the discretion of the observation service:
  - 1. Observation service shall perform a visual inspection of the work area. A visual inspection shall be considered passed when no remaining ACM or ACCM scheduled for removal can be observed and no dust or debris is visible inside the work area. At the discretion of the owner, a work area may be cleared solely by visual inspection. After the visual inspection is passed, the contractor may be required to apply an encapsulant to the work area.
  - 2. After the encapsulant has been allowed to settle and dry (typically requiring 12-24 hours), the observation service may elect to collect clearance air samples. The observation service shall select the total number of clearance samples needed and the location of the samples.
  - 3. Air clearance samples, when collected, shall be analyzed by 40 CFR Part 763, Appendix A to Subpart E TEM Method (TEM-AHERA). When approved in advance, PCM clearance by NIOSH 7400 Method may be used with a minimum air volume of 1,200 liters. NIOSH 7402 Method may be used in conjunction with the 7400 Method.
  - 4. Air clearance samples shall be considered passing when the average concentration of all clearance samples collected inside a single work area does not exceed 70 structures per millimeter squared (70 str./mm²) by the TEM-AHERA Method.
  - 5. At the discretion of the owner, when any clearance sample result exceeds 70-str./mm², the contractor may be required to re-clean the work area at no additional expense to the owner.
  - 6. When PCM clearance sampling is used, the clearance criteria shall be a fiber concentration <0.010 f/cc for each individual sample. At the owner's discretion, when the individual sample(s) exceed 0.010 f/cc, these samples may be re-analyzed by NIOSH 7402 Method.

- The analytical results of the NIOSH 7402 Method shall take precedence over the NIOSH Method 7400 analysis of the same sample.
- 7. If the above clearance air sampling thresholds are exceeded, the contractor shall be required to re-clean the subject work area at no additional cost to the owner. Additional air clearance sampling will be performed under the above protocol and any costs to the owner (i.e., laboratory fees, observation service's time, delays to the project) may be back charged to the contractor.
- E. Personal monitoring and other monitoring, which are required by law, or considered necessary by the contractor for worker protection shall be the responsibility of the contractor. The contractor shall submit all personal air monitoring data received. In no event shall results be submitted more than 5 working days from the day of collection.

#### **PART 2 - WORKER PROTECTION**

#### 2.1 TRAINING PROGRAM

- A. Each employee shall receive training in the proper handling of materials that contain asbestos, including all aspects of work procedures and protective measures, use of protective clothing and respiratory protection, use of showers, on entry and exit procedures from work areas, and in OSHA regulations. Each employee shall also understand the health implications and risks involved, including the illness possible from exposure to airborne asbestos fibers and the increased risk of lung cancer associated with smoking cigarettes and asbestos exposure, understand the use and limits of the respiratory equipment to be used, and understand the purpose of medical surveillance and the monitoring of airborne quantities of asbestos as related to health and respiratory equipment. The training program shall comply with federal, state, and local regulatory requirements.
- B. Emergency evacuation procedures to be followed in the event of worker injury shall be included in the worker training program.

## 2.2 MEDICAL SURVEILLANCE REQUIREMENTS

A. Before exposure to airborne asbestos, the contractor will provide each employee performing labor or professional services at the project site with a current comprehensive medical exam in compliance with the requirements of California Code of Regulations Title 8, Section 1529. The medical report shall contain a statement from the examining physician that the employee can (or cannot) function normally wearing a respirator or that the safety or health of the employee or other employees will or will not be impaired by his use of a respirator. No employee will be allowed to enter the work area without having first provided a copy of their medical examination to the owner's representative and until the submitted medical has been approved by the observation service.

## 2.3 PERSONAL PROTECTIVE EQUIPMENT

A. Work clothes shall consist of disposable full-body coveralls with hoods, rubber gloves, and safety shoes or equivalent. Sleeves at wrists and cuffs at ankles shall be appropriately secured. Fire retardant full-body coveralls are required in areas of open flame, or where required by local regulations.

- B. Eye protection and hard hats shall be available as appropriate or as required by applicable safety regulations.
- C. Provide authorized visitors with suitable protective clothing, headgear, eye protection, and disposable footwear covering whenever they are required to enter the work area.

#### 2.4 RESPIRATORS

- A. Respiratory protective equipment shall be NIOSH approved in accordance with the provisions of 8 CCR 5144 and 8 CCR 1529 unless superseded by local regulations with more stringent requirements.
- B. Contractor shall maintain a respiratory protection plan in accordance with 8 CCR 5144.
- C. The contractor shall provide workers with approved, permanently personally issued, and marked respirators with changeable filters. The contractor shall provide enough quantity of filters approved for asbestos so that workers can change filters during the workday. Filters shall not be used any longer than one (1) workday or whenever an increase in breathing resistance is detected. The respirator filters shall be stored at the job site in the Clean Room and shall be totally protected from exposure to asbestos before their use.
- D. Workers shall wear appropriate respirators inside regulated work areas in accordance with 8 CCR 1529 until an NEA for each work task is submitted.

#### 2.5 WORKER PROTECTION PROCEDURES

Bilingual (English and other appropriate language[s]) worker protection procedures must be posted on the job site. If the primary spoken language of all workers is English, the bilingual procedures are exempted.

A. Contractor shall comply with all required worker safety regulations including, but not limited to, 8 CCR 1529 and 8 CCR Chapter 4, Subchapter 4, Construction Safety Orders.

#### 2.6 EMPLOYEE IDENTIFICATION

A. The contractor shall furnish an employee roster to the owner's representative for each work shift. Each employee shall bring to the job at least two forms of identification, one of which has his/her photograph.

#### **PART 3 - PRODUCTS**

- 3.1 GENERAL
  - A. Contractor shall furnish, provide, and utilize the following products in the work as specified.
- 3.2 PROTECTIVE COVERING (PLASTIC)

A. Ten (10) mil, six (6) mil, four (4) mil, and three (3) mil polyethylene sheets in sizes to minimize the frequency of joints. The protective covering shall be flame retardant.

#### 3.3 TAPE

A. Duct Tape 2" or wider, or equal, and capable of sealing joints of adjacent sheets of plastic, and for attachment of plastic sheet to finished or unfinished surfaces of dissimilar materials, and capable of adhering under both dry and wet conditions, including use of amended water.

#### 3.4 DISPOSAL CONTAINERS AND BAGS

- A. Appropriately labeled clear, double six (6) mil sealable polyethylene bags as a minimum.
- B. Appropriately labeled, sealable, and impermeable drum containers.
- C. Bilingual labels (English and other appropriate language[s]) on containment glovebags, waste packages, contaminated material packages, and other containers shall be in accordance with EPA, OSHA, DOT, and DTSC standards.

#### 3.5 WARNING LABELS AND SIGNS

A. As required by 29 CFR 1910.1101 and CCR Title 8 1529 and other pertinent state and local regulations, whichever is the most stringent.

#### 3.6 NOT USED

## 3.7 ENCAPSULATING SEALER

- A. Shall be a penetrating or bridging type, pollution-free, non-toxic, with a Class A fire classification as specified herein. Material shall be flexible when cured, and resistant to weathering, oxidation, aging, and abuse.
- B. Shall be a water-dispensed coating, insoluble in water when cured.
- C. Shall be used undiluted or mixed as directed by the manufacturer.
- D. Shall have a written certification from the manufacturer that the encapsulant is compatible with the replacement material and will safely withstand temperatures of all surfaces on which the encapsulation will be applied.
- E. The owner's representative may at any time take random samples of encapsulant from open containers or spray equipment for testing to ensure product quality and compliance with the specifications.
- F. Encapsulant found not to be in conformance with the requirements of these specifications shall be removed from the site immediately. All areas where the defective encapsulant has been applied shall be resprayed with an approved encapsulant or remedied in a manner, including the

possibility of removal and replacement of the subject ACM, acceptable to the owner. Reencapsulation expenses shall be borne by the contractor.

G. The contractor shall submit SDS (Safety Data Sheet) for encapsulating sealer to the observation service for evaluation prior to application.

#### 3.8 GLOVEBAGS

A. Not Used

#### 3.9 TOOLS AND EQUIPMENT

- A. Provide suitable tools for asbestos removal and encapsulation.
- B. HEPA-filtered equipment:
  - 1. All vacuums and negative air pressure equipment shall possess high-efficiency particulate air (HEPA) filtration systems in compliance with ANSI Z9.2, local exhaust ventilation.
  - 2. No air movement system or air filtering equipment shall discharge unfiltered air outside the work area without written approval from the owner.
  - 3. All HEPA-filtered equipment shall be "DOP" (or equivalent) tested on-site for all units prior to use.

#### C. Manometer:

1. Shall have a built-in alarm. Continuous hard copy readout and data logging are required.

#### 3.10 LUMBER

A. Shall be flame retardant and carrying markings certifying such properties.

#### 3.11 SOLVENTS

- A. Shall be non-toxic, non-carcinogenic, nonflammable (flashpoint in excess of 200° F), non-reactive with or damaging to materials it will come in contact with and approved for indoor use by regulatory agencies. Provide ventilation of the work area as required by the manufacturer. Vent exhaust to the exterior of the building in a manner that will not result in adverse effects on other areas of the facility, adjacent facilities, or public areas. Solvents shall not be used in areas in which food items are stored.
- B. The Contractor shall submit Safety Data Sheets (SDS) for each, and every product used on site. Product SDS shall be submitted along with other pre-job submittals prior to the commencement of work. No product shall be used or substituted without submitting a current SDS for review and approval by the owner's representative.
- C. Mastic solvents shall be low odor and not leave any objectionable, noxious, or toxic odors after use. The contractor shall be responsible for ensuring that solvents do not leave odors.

D. All costs associated with air quality sampling due to misplacement of exhaust resulting in complaints by adjacent occupied spaces shall be borne by the contractor.

## **PART 4 - EXECUTION**

All Class I, II, and III asbestos work shall be conducted within regulated areas. The regulated area shall be demarcated in a manner that minimizes the number of persons within the area and protects persons outside the area from exposure to airborne asbestos. Where critical barriers or negative pressure enclosures are used, they may demarcate the regulated area. Access to regulated areas shall be limited to authorized persons. The contractor shall ensure that employees do not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the regulated area. The contractor shall only permit smoking in areas designated by the owner.

#### 4.1 WORK AREA PREPARATION

- A. Preparation procedures for removal of ALL FRIABLE (RACM), CATEGORY I MATERIALS, AND CATEGORY II NON-FRIABLE:
  - 1. Removal of the above or other ACM, unless specified otherwise, shall be executed in a contained and regulated work area.
  - 2. Contractor shall isolate all interior work areas for the duration of the project, completely sealing all openings including, but not limited to, HVAC ducts, diffusers and grilles, skylights, doorways, and windows, with, at a minimum, six (6) mil polyethylene taped securely to a clean surface. Spray adhesive used on finished surfaces should be avoided where possible.
    - Particular attention shall be paid to the sealing of cracks in the field area openings along the perimeter of the floor, openings at floor/wall intersection adjacent to utility shafts, and any other openings in the floor in general that would provide an avenue for water migration. Barriers shall form a seal at vertical walls and at the floor deck above and below.
  - 3. HVAC systems shall be shut down, wherever possible. The contractor shall coordinate with the owner to shut down the HVAC systems inside the work area. The Contractor shall design the work area preparation and engineering controls as specified and/or as required to prevent damage to and contamination of the affected HVAC system.
  - 4. If the HVAC system cannot be shut down, the isolation system must withstand all foreseeable fluctuations in temperature and pressure. Plastic sheeting and tape alone are typically insufficient to meet this requirement.
  - 5. The Contractor shall remove all movable objects from the work area that are vulnerable to damage or contamination, or that will impede or prevent the completion of the work. All movable objects removed from the work area shall be cleaned before being moved to the designated storage area.
  - 6. Clean and cover fixed and movable objects that can remain in the work area with six (6) mil polyethylene sheeting taped securely in place. Special precautions shall be taken to protect fixed objects vulnerable to damage or contamination.
  - 7. All fixed and movable objects requiring cleaning shall be washed with amended water and/or cleaned with a HEPA-filtered vacuum.

- 8. Work area (containment): The Contractor shall cover the entire floor, as appropriate, with a minimum of one (1) six (6) mil protective coverings. Cover wall and column surfaces, as appropriate, with a minimum of one (1) four (4) mil protective covering. Floor coverings shall extend a minimum of 12" up vertical surfaces and behind wall covers. All seams shall be staggered and securely taped.
- 9. Install plexiglass observation window(s) at strategic location(s) in the containment barrier to allow observation of work from outside the work area. Observation windows shall have, at a minimum, an 18" x 18" viewable area. Do not install observation windows at locations accessible to building occupants or the public unless there is no other suitable location.
- 10. Seal all wall, plumbing, duct, and other cavities to prevent asbestos fibers from falling into such cavities during the work.
- 11. The contractor shall check <u>regularly</u> (at the beginning, middle and end of each shift as a minimum) all isolation and containment (protective) barriers for punctures, loose seals, contact with heat-generating devices, etc. Problem areas shall be repaired or mended <u>immediately</u>. Visible smoke tubes shall be used to verify containment integrity.
- 12. Maintain existing emergency exits from the building wherever possible. Emergency exit access shall be coordinated with the general contractor and the owner. Maintain a minimum of two (2) exits from work areas where possible. The first exit shall be through the decontamination enclosure system. The second exit may be the waste load-out or an easily operable emergency-only exit in the plastic containment at a door, window, or other appropriate location. Exits, where possible, shall be on opposite ends of the work area. All exits shall be labeled in bright letters or signage. The second exit shall be labeled "Emergency Exit Only." Establish alternative exits satisfactory to fire officials where existing building or work area emergency exits are unavoidably blocked by activities of this project.
- 13. Provide and maintain an appropriate fire extinguisher inside and outside the Work Area. [One 30-pound type "ABC" fire extinguisher is required for each 2,000 sq. ft. of floor area.]
- 14. Install and maintain temporary emergency exit lighting with battery backup power in all work areas. Work areas with adequate natural lighting and no anticipated night work are exempt from this requirement.
- 15. Electric power inside the work area must be GFCI protected during the wet removal or encapsulation phase of the Project. Provide temporary power and lighting when necessary and ensure safe installation of temporary power sources and equipment per applicable electrical code requirements including appropriate ground fault protection. Temporary light fixtures will be explosion-proof. Provide and maintain auxiliary generator equipment where existing facility power is insufficient. Locate the generator or vent generator exhaust in a manner that will prevent carbon monoxide hazards to workers and the public. When a power shutdown is required, the contractor shall check for conditions where shutdown will pose a danger to the building or the building's components. The contractor shall take all precautions necessary, including inspections and testing, to ensure the safety of his employees and other building occupants from electrical hazards during the course of the project. Existing fire, smoke detection, and other life safety systems shall be kept in operation at all times, or the contractor shall install and maintain a temporary system or alternate acceptable to the owner and fire officials.

- 16. The contractor shall install and maintain negative air pressure equipment in all negative pressure enclosures and mini-enclosures during the abatement and decontamination phases of the project. Such equipment shall be kept in operation until the contractor is notified by the owner or observations service that the work area has been cleared. In full negative pressure enclosures, enough air shall be exhausted by the unit(s) to create a pressure of -0.020 inches of water within the work area concerning the area outside the work area in addition to a minimum of 4-air changes per hour. The contractor shall have a backup unit in place should the working unit fail, and for filter changes.
- 17. Install and maintain a manometer at every full negative pressure enclosure from the time abatement begins until the contractor receives the notification of clearance from the owner or observation service. Provide printouts of the manometer readings (dated & time-stamped) to the owner or observation service upon request.
- 18. Notify the observation service twenty-four (24) hours in advance of when preparatory steps will be completed. Asbestos abatement work shall not commence until all preparation requirements have been completed; all tools, equipment, and materials are on hand; all required submittals, notices, and permits have been approved, and until the observation service or owner authorizes in writing that work may commence.

#### 4.2 DECONTAMINATION ENCLOSURE SYSTEMS

- A. Decontamination enclosure systems (worker and equipment) general requirements:
  - 1. Build suitable wood, metal, or PVC framing as needed to support the decontamination enclosure. Framed walls susceptible to damage or which also form a security barrier between Work Areas and public areas shall be protected with a hard barrier such as 3/8" plywood or equivalent. Portable prefabricated units, if utilized, must be submitted for review and approval by the observation service before the start of construction. Submittal shall include, but not be limited to, a floor plan layout complying with the schematic layouts bound herein, showing dimensions, materials, sizes, thickness, plumbing, electrical outlets, etc.
- B. Decontamination area for asbestos work in regulated work areas for Class II work, Non-Classified ACCM removal, or where the exposure levels will not likely exceed the PEL for Asbestos:
  - 1. Construct a decontamination system consisting of one enclosed chamber as follows:
    - a. A clean room with an airlock of sufficient size to allow workers to change from street clothes to protective clothing. The clean room shall also contain means to decontaminate respirators and personnel.

#### 4.3 ASBESTOS REMOVAL - GENERAL

- A. Before removal, asbestos materials shall be sprayed with amended water. The asbestos materials shall be sufficiently saturated without causing excessive dripping and to prevent ambient emission of airborne fibers, at any time, more than 0.10 fibers/cc. Spray materials repeatedly during the work process to maintain a wet condition. If the materials are not easily saturated, then the work area shall be constantly misted to keep fiber emission minimal.
- B. Asbestos material shall be removed in manageable sections by a multi-person team, some of whom are wetting and the remainder removing and cleaning. Any material which falls to the

floor shall be wetted and picked up immediately. Material shall not be allowed to dry out. Outside of a full negative pressure enclosure, material drop shall not exceed 5 feet. For heights exceeding 5 feet, provide enclosed dust-proof chutes under negative pressure using HEPA air-filtration devices. Before a second area can be started, removed material shall be packed into approved and labeled packaging while it is still wet. The outside of all containers shall be cleaned before leaving the work area. Move containers to the waste load-out area, wet-clean each container thoroughly, and remove them to uncontaminated areas.

- C. The Contractor shall not remove any asbestos material in one shift that can be cleaned up and properly bagged in labeled 6-mil asbestos bags by the end of the shift. No loose asbestos material may be left in a work area after the end of any shift.
- D. Asbestos material applied to steel decks, beams, columns, pipes, tanks, and other nonporous surfaces, e.g., MEP components, shall be wet cleaned to a degree that no traces of debris or residue are visible.
- E. Asbestos material debris, drippings, splatters, and overspray on surfaces within ceiling cavities and other accessible areas shall be removed in the same manner and cleaned to the degree specified above.
- F. The work area shall be kept orderly, clean, and clear of work materials, polyethylene sheeting, tape, cleaning material, and clothing. All disposable material or items used in the work area shall be packed into properly labeled protective packaging and removed from the work area for disposal as asbestos waste material.
- G. Protective packages and drums containing asbestos materials shall be cleaned and removed from the work area. Such waste containers shall be stored in labeled, locked storage areas or containers until the time when the materials are to be loaded and hauled to the appropriate waste disposal facility for burial. The packages and drums shall be stored in piles no higher than four (4) feet, and in a manner that will not result in damage to the packages or drums. Transport bags in covered drums or carts from the waste loadout to the storage area or transport. The waste storage area shall always be locked when waste is not actively being transported to or from the storage area.
- H. Equipment removal procedures: clean surfaces of contaminated equipment thoroughly by wetsponging or wiping before removal to uncontaminated areas.
- I. Do not bag water used during abatement activities. Properly filter and drain water into the building's sanitary drain unless prohibited by local regulations. Filter shall have a maximum pore size of 5.0-um.

## 4.4 SPECIFIC ASBESTOS REMOVAL METHODS

- A. Specific control methods for Class I work or work suspected or anticipated to exceed the PEL shall be performed using any or all the following control methods. Methods shall be selected in the contractor's asbestos plan and approved by the owner or observation service.
  - 1. Negative pressure enclosure (NPE) systems: the negative pressure enclosure shall be kept under negative pressure with at least 4 air changes per hour. A minimum of -0.020 column inches of water pressure differential, relative to the outside pressure, shall be maintained and evidenced by manometric measurements. Air movement shall be directed away from the

- employees and toward a HEPA filtration device. The NPE shall be smoke tested for leaks prior to the start of work and may be tested at any time by the owner or observation service.
- 2. Mini-enclosure systems: the mini-enclosure system shall be constructed in compliance with 8 CCR 1529 requirements. Visible negative pressure shall be maintained in the mini-enclosure throughout the work and until notified of clearance by the owner or observation service.
- B. Class II work not anticipated or suspected to exceed the PEL, the following engineering controls, and work practices may be used:
  - 1. The use of full negative pressure enclosure systems is required for the removal of any friable asbestos-containing material exceeding 100 square feet.
  - 2. A competent person shall supervise the work.
  - 3. For indoor work, critical barriers shall be placed over all openings to the regulated area.
  - 4. For indoor work, negative pressure in relation to adjacent spaces shall be established and monitored in the work area. At least 4 air exchanges per hour shall be maintained in any enclosed work area. The negative pressure shall be maintained throughout the work and until the contractor receives the notification of clearance from the owner or observation service.
  - 5. Impermeable dropcloths shall be placed on surfaces beneath all removal activity.

#### 4.5 DECONTAMINATION OF THE WORK AREA

- A. Decontamination procedures for contained or regulated work areas (Friable, Class I and II, and Category I and II non-friable), excluding ACM encapsulation work:
  - 1. Remove all visible accumulations of ACWM and debris. Wet-clean all surfaces within the work area to remove asbestos residue. Wait at least one (1) hour to allow for the settlement of dust, and again wet-clean, or clean with HEPA vacuum equipment, all surfaces within the work area. After completing the second cleaning operation the contractor shall perform a complete visual inspection of the work area to ensure that the work area is free of contamination.
  - 2. Sealed drums and bags, and all equipment used in the work area shall be included in the cleanup and shall be removed from the work area via the waste loadout at the appropriate time in the cleaning sequence.
  - 3. After cleaning, the contractor shall perform a complete visual inspection of the work area to ensure that the work area is free of any visible debris or residue.
  - 4. Upon completion of the visual inspection, the contractor shall notify the observation service in advance that the work area is ready for the 3<sup>rd</sup> party visual inspection.
  - 5. Upon proper notification, the observation service will perform a pre-testing visual inspection consisting of two components: review the work area for general conformance with the specifications and close inspection of the work area for any traces of dust, debris, or residue of ACM. The observation service shall notify the contractor of any dust, debris, or residues observed.

- 6. Upon successful compliance with the pre-testing visual inspection by the observation service and after notification, the contractor shall encapsulate surfaces where asbestos materials have been removed. Unless specified otherwise, encapsulate those portions of the items where the ACM was located prior to the start of this contract. All surfaces within the ceiling, wall, and other accessible cavities where spray-applied or trowel-applied materials have been removed shall also be encapsulated. Apply encapsulant in accordance with the manufacturer's instructions. The encapsulant shall be compatible with the existing substrate and replacement materials and shall be rated to safely withstand the temperature of the items to which it will be applied. Encapsulants to be applied to structural members prior to reapplication of spray-applied or trowel-applied fireproofing must be a component of the fireproofing system when it was tested and rated by the Underwriters Laboratory (UL), American Society for Testing Materials (ASTM), Factory Mutual (FM) or other building code approved testing agencies.
- 7. Upon completion of the encapsulation work, the contractor shall notify the observation service that the work area is ready for clearance testing. Refer to the appropriate article on air monitoring in this section for clearance testing standards.
- 8. Upon written notification from the observation service that the work area has passed the standard for clearance testing, the contractor shall apply, when included in the contract the asbestos-free replacement materials and reestablish objects and systems as specified in these specifications. The plastic barriers, decontamination enclosure systems, and negative air pressure equipment may be removed by the contractor at any time after written notification of clearance.

## 4.6 ASBESTOS DISPOSAL REQUIREMENTS

- A. Friable asbestos waste shall be contained in a clear, 6-mil asbestos-labeled bag, goose-necked, and taped. This bag shall be placed into another labeled asbestos bag, goose-necked, and taped. A generator identification label shall be affixed to each bag, double bagged, sealed, and labeled containers of asbestos waste shall be removed to a secure storage location daily. All asbestos wastes shall be transported to a pre-approved waste site in accordance with the guidelines of 22 CCR Division 4 and 4.5, Hazardous Waste. The owner's designated representative shall inspect the waste and sign the uniform hazardous waste shipping manifests and Land Ban Notification prior to transporting and disposal. The owner's designated representative is the **ONLY** person authorized to sign the manifest and Land ban and shall retain the original generator copy of the manifest. A copy of the Land Ban Notification or any required pertinent documentation must also be submitted in order to verify proper disposal.
- B. Containers removed from the waste load-out must be removed by workers who have entered uncontaminated areas dressed in clean coveralls. Workers must not enter from uncontaminated areas into the work area; contaminated workers must not exit the work area through the waste load-out.
- C. The contractor shall notify the observation service twenty-four (24) hours in advance when RACM are to be removed from the site. The observation service must be present during the removal of RACM from the work area. A copy of the uniform hazardous waste manifest and any other document required by State or Local agencies shall be submitted to the observation service for review prior to transporting RACM to the disposal facility.
- D. At the conclusion of work, the contractor shall provide evidence (such as a bill of lading or hazardous waste manifest and landfill receipt) that the RACM was disposed of at the approved

EPA hazardous waste disposal facility. The evidence shall be submitted with the final request for payment. The contractor shall indicate on the bill of lading or hazardous waste manifest the volume, **in cubic yards**, of the RACM generated from the project. This volume amount must be confirmed by a party independent of the contractor.

- E. The contractor shall be responsible for the safe handling and transportation of all hazardous waste generated by the execution of this contract to the designated hazardous waste disposal facility. The contractor shall bear all costs for all claims, damages, losses, and clean-up expenses against the owner or the observation service, including but not limited to attorney's fees arising out of or resulting from asbestos spills on the site or spills en route to the hazardous waste disposal facility.
- F. Waste manifest forms shall be provided by the Contractor. The contractor shall coordinate with the owner to ensure that the information in Box 1 (Generator's EPA ID number) and Box 5 (Generator's name and mailing address) are complete and correct. If the California Uniform Hazardous Waste Manifest is used the contractor shall include all information necessary to comply with the Federal EPA Waste Shipment Record requirements.
- G. Contaminated clothing and polyethylene shall be disposed of as ACWM.
- H. Wastewater from wet stripping, shower room, and worker and equipment decontamination systems shall be filtered through a filtration treatment system capable of removing all particles 5μ or greater in size if it is discharged into the sanitary sewer system. If the wastewater contains regulated constituents not suitable for disposal to a sanitary sewer it shall be disposed of at a permitted facility in accordance with applicable laws and regulations.
- I. The work area shall remain under abatement control measures until the observation service has completed the final visual inspection and/or air sampling and given the approval to dismantle the regulated area.
- J. If requested, the primary polyethylene barrier shall be left in place after abatement as a dust barrier during ensuing non-asbestos construction activities. If contamination cannot be removed from the barrier, the contractor shall remove it and erect a new one in the same location.
- K. All non-disposable equipment, including negative air machines shall be cleaned and decontaminated prior to removal from the regulated area.

#### 4.7 AIR MONITORING AND TESTING

- A. Personal Air Monitoring (contractor's responsibility):
  - 1. Initial and periodic eight (8) hour TWA and thirty (30) minute excursion limit air monitoring of worker exposures to airborne concentrations of asbestos fibers shall be in accordance with Cal/OSHA (8 CCR 1529) requirements.
  - 2. The contractor shall report personal monitoring results to the observation service within 5 working days from the end of the work shift. Worker exposures to airborne asbestos concentrations shall not exceed the Permissible Exposure Limit (PEL) of an 8-hour time-weighted average (TWA) of 0.10 fibers per cubic centimeter of air.
- 4.8 REIMBURSEMENT OF COSTS OF THE OWNER OR THE OBSERVATION SERVICE

A. In the event that reviews and/or clearance testing by the observation service or regulatory agencies shows that the work area or any portion of the work area is not decontaminated or if the work is not in conformance with the contract documents, the owner, observation service and his consultants will record all time, tests and project-related expenses expended to monitor the work until the work is in compliance. All time, and expenses recorded by the owner, observation service, and its consultants to monitor the above work, and all time, tests, and project-related expenses incurred by the owner and observation service and its consultants outside the project workdays, work hours, or contract time shall, at the discretion of the owner, be paid for by the contractor. The contractor, promptly upon receipt of the billing from the owner, shall reimburse the owner at the normal billing rate of the owner or the observation service and his consultants, or the owner is authorized to withhold funds from the contract sum, for all time spent by the owner, observation service and his consultants for reviews, testing, and other project related expenses when any of the above conditions occur.

#### 4.9 STOPPING THE WORK

A. If at any time, the owner or observation service decides that work practices are violating pertinent regulations, these specifications or, in its opinion, endangering workers or the public, they will immediately notify the contractor (followed up in writing) that operations shall cease until corrective action is taken, and the contractor shall take such corrective action before proceeding with the work. Loss or damages due to a stop work order shall be borne by the contractor.

**END OF SECTION** 

