City of Palo Alto
City Council Staff Report

(ID # 1420)

Report Type: Consent Calendar **Meeting Date: 4/11/2011**

Summary Title: Approval of Hazmat Removal Contract for Art Center

Title: Approval of a Contract with Tradestaff Contracting Services in a Total Amount Not to Exceed $167,500 for Hazardous Material Removal at the Palo Alto Art Center (PF-07000, Art Center Electrical and Mechanical Upgrades)

From: City Manager

Lead Department: Public Works

RECOMMENDATION
Staff recommends that Council:

1. Approve and authorize the City Manager or his designee to execute a general services agreement between the City of Palo Alto and Tradestaff Contracting Services, Inc. (Attachment A), in the amount of $139,500 for the hazardous materials abatement at the Palo Alto Art Center.

2. Authorize the City Manager or his designee to negotiate and execute one or more change orders to the contract with Tradestaff Contracting Services, Inc., for related, additional but unforeseen work which may develop during the project, the total value of which shall not exceed $28,000 (20%).

BACKGROUND
The 28,000 square foot Art Center facility and its building infrastructure and systems have not been significantly upgraded since the facility was constructed in 1951 as Palo Alto's City Hall. The only major repairs made to the facility have been seismic improvements in 1987. In 1999, the Palo Alto Art Center Foundation (the Foundation) began to address the need for renovations proactively by focusing on two programmatic concerns and facility challenges: 1) the need for upgrades to the gallery spaces of the Art Center to support the popular exhibition program, and 2) the need for additional children's art classrooms and program space to meet the demand in the community. In March, 1999, the Palo Alto City Council approved a proposal from the Palo Alto Art Center Foundation to explore the development of a public/private partnership that would make possible a capital campaign to expand and renovate the Art Center.

The City and the Foundation jointly developed a Design Agreement. When the Agreement was initiated, the Foundation had intended to manage the project through all phases of design and

construction, however, during design development, the City's portion of the project scope became a larger percentage of the overall project, and more technically involved. As a result of this change, the Foundation and City staff recommended that, and received Council approval for the City managing the bid and construction phases (CMR:168:09).

The City's scope of work includes mechanical, electrical, and accessibility upgrades to the facility, while the Foundation's scope of work includes the creation of a Children's Wing and an upgrade of the exhibition galleries. While the scope of City-sponsored work differs from the Foundation-sponsored work, both parties agree that it will be more efficient, cost-effective, and less disruptive to the community to have the work completed concurrently. In addition to the above-mentioned electrical, mechanical and Children's Wing improvements, the City has added deferred-maintenance items to the project such as a new roof, new gutters, new downspouts, seismic upgrade to roofing envelope, exterior painting, new carpets, additional interior painting, termite treatment and dry rot repairs, new window safety glazing, exterior lighting improvements, and repair to damaged tile planters in the courtyard area. The City will also be adding a 1% for public art as part of the overall Art Center renovation project. In addition, the Art Center auditorium was identified as the preferred location for a temporary library during the renovation of the adjacent Main Library (CMR:435:10). The auditorium was not part of the Art Center improvement project, but will have improved lighting, carpeting and other amenities to make it suitable as a temporary library.

Discussion

Hazardous materials such as asbestos and lead must be removed from the Art Center prior to the main construction effort that will begin this summer. Given the age of the facility, the hazardous material is located throughout the building, including the roofing underlayment. Removal of this material by means of a contract with Tradestaff Contracting Services will save time on the Art Center construction schedule by not waiting until a general contractor is under contract to begin the removal. It will also save money in that the general contractor will not mark-up the fees of a hazardous material subcontractor.

A formal Request for Quotations (RFQ) for the Art Center hazardous materials abatement was advertised on February 28, 2011. The bidding period was 23 days. Bids were received from 13 contractors on March 22, 2011, as listed on the attached bid summary (Attachment B). Bids ranged from a low of $139,500 to a high of $767,190.

Summary of Bid Process

Bid Name/Number RFQ 140517	Palo Alto Art Center Hazardous Materials Abatement Project
Proposed Length of Project	30 calendar days
Number of Bids Mailed to Contractors	22
Number of Bids Mailed to Builder's Exchanges	0

Total Days to Respond to Bid	23
Pre-Bid Meeting?	Yes
Number of Company Attendees at Pre-Bid Meeting	15
Number of Bids Received	13
Bid Price Range*	Low of $139,500 to a high of $767,190

*Bid summary provided in Attachment B

Staff has reviewed all bids submitted and recommends that the bid of $139,500 submitted by Tradestaff Contracting Services, Inc., be accepted and that Tradestaff Contracting Services, Inc., be declared the lowest responsible bidder. The bid is 43 percent below the engineer's estimate of $245,000. The low bids for this project can be attributed to the current depressed economic conditions, which are highly conducive to competitive bidding.

Staff confirmed with the Contractor's State License Board that the contractor has an active license on file. Staff checked references supplied by the contractor for previous work performed and found no major complaints.

A contingency amount of 20 percent is requested because of the age of the building and the large areas undergoing remediation, which increases the potential for unforeseen building conditions such as additional termites or dry rot areas.

RESOURCE IMPACT

Funds for the hazardous material removal are available in the Capital Improvement Program Project PF-07000, Art Center Electrical and Mechanical Upgrades. Per the funding agreement with the Foundation, the cost of this work will be borne only by the City as it is deferred maintenance.

Staff may return to Council at the time of the award of the larger construction contract in order to cover any increased costs due to the inclusion of deferred maintenance items into the project.

POLICY IMPLICATIONS

Removing hazardous materials is consistent with the City's goal to reduce the infrastructure backlog. Hazardous material removal and other deferred maintenance items that are part of the Art Center renovation project will be removed from the City's backlog list by the Infrastructure Task Force.

TIMELINE

Staff relocation to the Lucie Stern Center lower office level and other locations throughout the City is in progress and once completed will be followed shortly thereafter by the removal of any hazardous materials. Construction on the primary major renovations, including the temporary Main Library in the auditorium, is expected to begin in the summer of 2011 and be completed

in the summer of 2012. Construction on the Main Library is expected to begin at the end of 2012, shortly after the opening of the new Mitchell Park Library and Community Center.

ENVIRONMENTAL REVIEW
This removal of hazardous materials was determined to be exempt from the California Environmental Quality Act (CEQA) review pursuant to Section 15301, "existing facilities."

Attachments:

- Attachment A- Contract (PDF)
- Attachment B- Bid Summary (PDF)

Prepared By: Karen Bengard, Senior Engineer

Department Head: J. Michael Sartor, Interim Director

City Manager Approval: James Keene, City Manager

GENERAL SERVICES AGREEMENT

THIS AGREEMENT made and entered into on the _____ day of April, 2011, by and between the **CITY OF PALO ALTO, a California Chartered Municipal Corporation** ("**CITY"**), and **TRADESTAFF CONTRACTING SERVICES**, a California corporation, with offices located at Route 2 Box 347, La Honda, CA 94020, Telephone Number: 650-851-6969 ("**CONTRACTOR"**). In consideration of their mutual covenants, the parties hereto agree as follows:

1. SERVICES. CONTRACTOR shall provide or furnish the services ("Services") described in the Scope of Services, attached as Exhibit A.

2. EXHIBITS. The following exhibits are attached to and made a part of this Agreement:

☒ "A" - Scope of Services
☒ "B" - Schedule of Performance
☒ "C" - Compensation
☒ "D" - Insurance Requirements
☐ "E" - Performance and/or Payment Bond (Not applicable)
☐ "F" - Liquidated Damages (Not applicable)

CONTRACT IS NOT COMPLETE UNLESS ALL EXHIBITS ARE ATTACHED.

3. TERM.
The term of this Agreement shall be from the date of its full execution through the completion of the services in accordance with the Schedule of Performance attached as Exhibit "B", subject to the provisions of Section Q and V of the General Terms and Conditions.

4. SCHEDULE OF PERFORMANCE. CONTRACTOR shall complete the Services within the term of this Agreement in a reasonably prompt and timely manner based upon the circumstances and direction communicated to CONTRACTOR, and if applicable, in accordance with the schedule set forth in the Schedule of Performance, attached as Exhibit B. Time is of the essence in this Agreement.

5. COMPENSATION FOR ORIGINAL TERM. CITY shall pay and CONTRACTOR agrees to accept as not to exceed compensation for the full performance of the Services and reimbursable expenses, if any:

☐ The total maximum lump sum compensation of dollars ($); **OR**

☐ The sum of dollars ($) per hour, not to exceed a total maximum compensation amount of dollars ($); **OR**

☑ A sum calculated in accordance with the fee schedule set forth in Exhibit C, not to exceed a total maximum compensation amount of one hundred thirty-nine thousand five hundred dollars ($139,500.00).

CONTRACTOR agrees that it can perform the Services for an amount not to exceed the total maximum compensation set forth above. Any hours worked or services performed by CONTRACTOR for which payment would result in a total exceeding the maximum amount of compensation set forth above for performance of the Services shall be at no cost to CITY.

☑ The City has set aside the sum of twenty-eight thousand ($28,000.00) for Additional Services. CONTRACTOR shall provide Additional Services only by advanced, written authorization from the City Manager or designee. CONTRACTOR, at the CITY's request, shall submit a detailed written proposal including a description of the scope of services, schedule,

level of effort, and CONTRACTOR's proposed maximum compensation, including reimbursable expense, for such services. Compensation shall be based on the hourly rates set forth above or in Exhibit C (whichever is applicable), or if such rates are not applicable, a negotiated lump sum. CITY shall not authorize and CONTRACTOR shall not perform any Additional Services for which payment would exceed the amount set forth above for Additional Services. Payment for Additional Services is subject to all requirements and restrictions in this Agreement.

6. COMPENSATION DURING ADDITIONAL TERMS.

☐ CONTRACTOR'S compensation rates for each additional term shall be the same as the original term; **OR**

☐ CONTRACTOR's compensation rates shall be adjusted effective on the commencement of each Additional Term. The lump sum compensation amount, hourly rates, or fees, whichever is applicable as set forth in section 5 above, shall be adjusted by a percentage equal to the change in the Consumer Price Index for Urban Wage Earners and Clerical Workers for the San Francisco-Oakland- San Jose area, published by the United States Department of Labor Statistics (CPI) which is published most immediately preceding the commencement of the applicable Additional Term, which shall be compared with the CPI published most immediately preceding the commencement date of the then expiring term. Notwithstanding the foregoing, in no event shall CONTRACTOR's compensation rates be increased by an amount exceeding five percent of the rates effective during the immediately preceding term. Any adjustment to CONTRACTOR's compensation rates shall be reflected in a written amendment to this Agreement.

7. INVOICING. Send all invoices to the CITY, Attention: Project Manager. The Project Manager is: **Karen Bengard, Public Works Department, P.O. Box 10250, Palo Alto, CA 94303, Telephone: 650-329-2636.** Invoices shall be submitted in arrears for Services performed. Invoices shall not be submitted more frequently than monthly. Invoices shall provide a detailed statement of Services performed during the invoice period and are subject to verification by CITY. CITY shall pay the undisputed amount of invoices within 30 days of receipt.

GENERAL TERMS AND CONDITIONS

A. ACCEPTANCE. CONTRACTOR accepts and agrees to all terms and conditions of this Agreement. This Agreement includes and is limited to the terms and conditions set forth in sections 1 through 6 above, these general terms and conditions and the attached exhibits.

B. QUALIFICATIONS. CONTRACTOR represents and warrants that it has the expertise and qualifications to complete the services described in Section 1 of this Agreement, entitled "SERVICES," and that every individual charged with the performance of the services under this Agreement has sufficient skill and experience and is duly licensed or certified, to the extent such licensing or certification is required by law, to perform the Services. CITY expressly relies on CONTRACTOR's representations regarding its skills, knowledge, and certifications. CONTRACTOR shall perform all work in accordance with generally accepted business practices and performance standards of the industry, including all federal, state, and local operation and safety regulations.

C. INDEPENDENT CONTRACTOR. It is understood and agreed that in the performance of this Agreement, CONTRACTOR and any person employed by CONTRACTOR shall at all times be considered an independent CONTRACTOR and not an agent or employee of CITY. CONTRACTOR shall be responsible for employing or engaging all persons necessary to complete the work required under this Agreement.

D. SUBCONTRACTORS. CONTRACTOR may not use subcontractors to perform any Services under this Agreement unless CONTRACTOR obtains prior written consent of CITY. CONTRACTOR shall be solely responsible for directing the work of approved subcontractors and for any compensation due to subcontractors**.**

E. TAXES AND CHARGES. CONTRACTOR shall be responsible for payment of all taxes, fees, contributions or charges applicable to the conduct of CONTRACTOR's business.

F. COMPLIANCE WITH LAWS. CONTRACTOR shall in the performance of the Services comply with all applicable federal, state and local laws, ordinances, regulations, and orders.

G. DAMAGE TO PUBLIC OR PRIVATE PROPERTY. CONTRACTOR shall, at its sole expense, repair in kind, or as the City Manager or designee shall direct, any damage to public or private property that occurs in connection with CONTRACTOR's performance of the Services.
CITY may decline to approve and may withhold payment in whole or in part to such extent as may be necessary to protect CITY from loss because of defective work not remedied or other damage to the CITY occurring in connection with CONTRACTOR's performance of the Services. CITY shall submit written documentation in support of such withholding upon CONTRACTOR's request. When the grounds described above are removed, payment shall be made for amounts withheld because of them.

H. WARRANTIES. CONTRACTOR expressly warrants that all services provided under this Agreement shall be performed in a professional and workmanlike manner in accordance with generally accepted business practices and performance standards of the industry and the requirements of this Agreement. CONTRACTOR expressly warrants that all materials, goods and equipment provided by CONTRACTOR under this Agreement shall be fit for the particular purpose intended, shall be free from defects, and shall conform to the requirements of this Agreement. CONTRACTOR agrees to promptly replace or correct any material or service not in compliance with these warranties, including incomplete, inaccurate, or defective material or service, at no further cost to CITY. The warranties set forth in this section shall be in effect for a period of one year from completion of the Services and shall survive the completion of the Services or termination of this Agreement.

I. MONITORING OF SERVICES. CITY may monitor the Services performed under this Agreement to determine whether CONTRACTOR's work is completed in a satisfactory manner and complies with the provisions of this Agreement.

J. CITY'S PROPERTY. Any reports, information, data or other material (including copyright interests) developed, collected, assembled, prepared, or caused to be prepared under this Agreement will become the property of CITY without restriction or limitation upon their use and will not be made available to any individual or organization by CONTRACTOR or its subcontractors, if any, without the prior written approval of the City Manager.

K. AUDITS. CONTRACTOR agrees to permit CITY and its authorized representatives to audit, at any reasonable time during the term of this Agreement and for three (3) years from the date of final payment, CONTRACTOR's records pertaining to matters covered by this Agreement. CONTRACTOR agrees to maintain accurate books and records in accordance with generally accepted accounting principles for at least three (3) following the terms of this Agreement.

L. NO IMPLIED WAIVER. No payment, partial payment, acceptance, or partial acceptance by CITY shall operate as a waiver on the part of CITY of any of its rights under this Agreement.

M. INSURANCE. CONTRACTOR, at its sole cost, shall purchase and maintain in full force during the term of this Agreement, the insurance coverage described in Exhibit D. Insurance must be provided by companies with a Best's Key rating of A-:VII or higher and which are otherwise acceptable to the City's Risk Manager. The City's Risk Manager must approve deductibles and self-insured retentions. In addition, all policies, endorsements, certificates and/or binders are subject to approval by the Risk Manager as to form and content. CONTRACTOR shall obtain a policy endorsement naming the City of Palo Alto as an additional insured under any general liability or automobile policy. CONTRACTOR shall obtain an endorsement stating that the insurance is primary coverage and will not be canceled or materially reduced in coverage or limits until after providing 30 days prior written notice of the cancellation or modification to the City's Risk Manager. CONTRACTOR shall provide certificates of such policies or other evidence of coverage satisfactory to CITY's Risk Manager, together with the required endorsements and evidence of payment of premiums, to CITY concurrently with the execution of this Agreement and shall throughout the term of this Agreement provide current certificates evidencing the required insurance coverages and

endorsements to the CITY's Risk Manager. CONTRACTOR shall include all subcontractors as insured under its policies or shall obtain and provide to CITY separate certificates and endorsements for each subcontractor that meet all the requirements of this section. The procuring of such required policies of insurance shall not operate to limit CONTRACTOR's liability or obligation to indemnify CITY under this Agreement.

N. HOLD HARMLESS. To the fullest extent permitted by law and without limitation by the provisions of section M relating to insurance, CONTRACTOR shall indemnify, defend and hold harmless CITY, its Council members, officers, employees and agents from and against any and all demands, claims, injuries, losses, or liabilities of any nature, including death or injury to any person, property damage or any other loss and including without limitation all damages, penalties, fines and judgments, associated investigation and administrative expenses and defense costs, including, but not limited to reasonable attorney's fees, courts costs and costs of alternative dispute resolution), arising out of, or resulting in any way from or in connection with the performance of this Agreement. The CONTRACTOR's obligations under this Section apply regardless of whether or not a liability is caused or contributed to by any negligent (passive or active) act or omission of CITY, except that the CONTRACTOR shall not be obligated to indemnify for liability arising from the sole negligence or willful misconduct of the CITY. The acceptance of the Services by CITY shall not operate as a waiver of the right of indemnification. The provisions of this Section survive the completion of the Services or termination of this Contract.

O. NON-DISCRIMINATION. As set forth in Palo Alto Municipal Code section 2.30.510, CONTRACTOR certifies that in the performance of this Agreement, it shall not discriminate in the employment of any person because of the race, skin color, gender, age, religion, disability, national origin, ancestry, sexual orientation, housing status, marital status, familial status, weight or height of such person. CONTRACTOR acknowledges that it has read and understands the provisions of Section 2.30.510 of the Palo Alto Municipal Code relating to Nondiscrimination Requirements and the penalties for violation thereof, and agrees to meet all requirements of Section 2.30.510 pertaining to nondiscrimination in employment.

P. WORKERS' COMPENSATION. CONTRACTOR, by executing this Agreement, certifies that it is aware of the provisions of the Labor Code of the State of California which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and certifies that it will comply with such provisions, as applicable, before commencing and during the performance of the Services.

Q. TERMINATION. The City Manager may terminate this Agreement without cause by giving ten (10) days' prior written notice thereof to CONTRACTOR. If CONTRACTOR fails to perform any of its material obligations under this Agreement, in addition to all other remedies provided by law, the City Manager may terminate this Agreement immediately upon written notice of termination. Upon receipt of such notice of termination, CONTRACTOR shall immediately discontinue performance. CITY, CITY shall pay CONTRACTOR for services satisfactorily performed up to the effective date of termination. If the termination if for cause, CITY may deduct from such payment the amount of actual damage, if any, sustained by CITY due to Contractor's failure to perform its material obligations under this Agreement. Upon termination, CONTRACTOR shall immediately deliver to the City Manager any and all copies of studies, sketches, drawings, computations, and other material or products, whether or not completed, prepared by CONTRACTOR or given to CONTRACTOR, in connection with this Agreement. Such materials shall become the property of CITY.

R. ASSIGNMENTS/CHANGES. This Agreement binds the parties and their successors and assigns to all covenants of this Agreement. This Agreement shall not be assigned or transferred without the prior written consent of the CITY. No amendments, changes or variations of any kind are authorized without the written consent of the CITY.

S. CONFLICT OF INTEREST. In accepting this Agreement, CONTRACTOR covenants that it presently has no interest, and will not acquire any interest, direct or indirect, financial or otherwise, which would conflict in any manner or degree with the performance of this Contract. CONTRACTOR further covenants that, in the performance of this Contract, it will not employ any person having such an interest. CONTRACTOR certifies that no City Officer, employee, or authorized representative has any financial interest in the business of CONTRACTOR and that no person associated with contractor has any interest,

direct or indirect, which could conflict with the faithful performance of this Contract. CONTRACTOR agrees to advise CITY if any conflict arises.

T. GOVERNING LAW. This contract shall be governed and interpreted by the laws of the State of California.

U. ENTIRE AGREEMENT. This Agreement, including all exhibits, represents the entire agreement between the parties with respect to the services that may be the subject of this Agreement. Any variance in the exhibits does not affect the validity of the Agreement and the Agreement itself controls over any conflicting provisions in the exhibits. This Agreement supersedes all prior agreements, representations, statements, negotiations and undertakings whether oral or written.

V. NON-APPROPRIATION. This Agreement is subject to the fiscal provisions of the Charter of the City of Palo Alto and the Palo Alto Municipal Code. This Agreement will terminate without any penalty (a) at the end of any fiscal year in the event that funds are not appropriated for the following fiscal year, or (b) at any time within a fiscal year in the event that funds are only appropriated for a portion of the fiscal year and funds for this Contract are no longer available. This Section shall take precedence in the event of a conflict with any other covenant, term, condition, or provision of this Contract.

W. ENVIRONMENTALLY PREFERRED PURCHASING AND ZERO WASTE REQUIREMENTS. CONTRACTOR shall comply with the City's Environmentally Preferred Purchasing policies which are available at the City's Purchasing Department which are incorporated by reference and may be amended from time to time. CONTRACTOR shall comply with waste reduction, reuse, recycling and disposal requirements of the City's Zero Waste Program. Zero Waste best practices include first minimizing and reducing waste; second, reusing waste and third, recycling or composting waste. In particular, Contractor shall comply with the following zero waste requirements:

- All printed materials provided by Contractor to City generated from a personal computer and printer including but not limited to, proposals, quotes, invoices, reports, and public education materials, shall be double-sided and printed on a minimum of 30% or greater post-consumer content paper, unless otherwise approved by the City's Project Manager. Any submitted materials printed by a professional printing company shall be a minimum of 30% or greater post-consumer material and printed with vegetable based inks.
- Goods purchased by Contractor on behalf of the City shall be purchased in accordance with the City's Environmental Purchasing Policy including but not limited to Extended Producer Responsibility requirements for products and packaging. A copy of this policy is on file at the Purchasing Office.
- Reusable/returnable pallets shall be taken back by the Contractor, at no additional cost to the City, for reuse or recycling. Contractor shall provide documentation from the facility accepting the pallets to verify that pallets are not being disposed.

X. AUTHORITY. The individual(s) executing this Agreement represent and warrant that they have the legal capacity and authority to do so on behalf of their respective legal entities.

Y. CONTRACT TERMS: All unchecked boxes do not apply to this Contract.

IN WITNESS WHEREOF, the parties hereto have by their duly authorized representatives executed this Agreement on the date first above written.

CITY OF PALO ALTO

_____
City Manager or Designee
(Required on contracts $85,000 and over)

N/A
Purchasing Manager or Designee

Approved as to form:

_____
Senior Asst. City Attorney

CONTRACTOR:
TRADESTAFF CONTRACTING SERVICES

By James Morris

Name

Title President

Telephone: 650-851-6969

PALO ALTO ART CENTER HAZARDOUS MATERIALS ABATEMENT PROJECT

CONTRACT C11140517

Contractor shall perform the hazardous materials abatement at the Palo Alto Art Center located at 1313 Newell Road, Palo Alto, CA.

Contractors to furnish all labor, material, facilities, equipment, transportation, services, employee training and testing as required to perform the work at the Palo Alto Art Center for mold and asbestos removal and lead related construction work, encapsulation, decontamination, disposal, and all other work per the latest regulations from the US. Environmental Protections Agency (EPA); Cal-EPA; the Occupational Safety and Health Administration (OSHA); the State of California Department of Industrial Relations (Cal/OSHA); the recommendations of the National Institute of Occupations Safety and Health (NIOSH); and any other applicable federal state and local government regulations, including all incidental and related work as required by the scope of services and general requirements detailed on the specifications in Exhibit A herein. The Asbestos Survey and Evaluation, and the Lead Survey and Evaluation included in the Request for Quotations (RFQ) 140517 are incorporated here by reference.

ProTech
Consulting & Engineering

1208 Main Street, Redwood City, CA 94063
(650) 569-4020 Fax (650) 569-4023

ASBESTOS ABATEMENT PROJECT SPECIFICATION

&

Lead Paint – Instructions to Bidders

ASBESTOS ABATEMENT PROJECT

Peninsula Art Center
1313 Newell Street
Palo Alto, California

PREPARED FOR

City of Palo Alto
P.O. Box 10250
Palo Alto, California 94303

PREPARED BY:

PROTECH CONSULTING AND ENGINEERING

ProTech
Consulting & Engineering

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HAZ-MAT PROJECT SPECIFICATION

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ASBESTOS ABATEMENT

PART 1 - GENERAL AND ADMINISTRATIVE REQUIREMENTS

1.00 DESCRIPTION

A. The asbestos abatement contractor shall furnish all labor, material, facilities, equipment, services, employee training and testing, permits and agreements necessary to perform the work required for asbestos removal, encapsulation, decontamination, disposal, and all other work in accordance with these specifications, the latest regulations from the US. Environmental Protections Agency (EPA), Cal-EPA, the Occupational Safety and Health Administration (OSHA), the State of California Department of Industrial Relations (Cal/OSHA), the recommendations of the National Institute of Occupations Safety and Health (NIOSH), and any other applicable federal state and local government regulations. Whenever there is a conflict or overlap of the above references, the most stringent provision shall apply.

B. Contractor must visit the work site to obtain first-hand knowledge of all existing conditions including ACM quantities. Contractor is responsible for all unusual conditions or deviations from the specifications that exist at the time of their site examination, and such conditions must be reflected in the bid proposal. Contractor will not be given extra payments above the accepted bid prices for conditions that can be determined by examining the site, all Contract Documents, and drawings prior to the submission of proposals.

C. No signs may be displayed on or about the Owner's property (except those required by law) without the Owner's specific approval; the size, content, and location to be as specified by the Owner. Advertising signs displaying the word "asbestos" or implying asbestos abatement are prohibited at the work site or around the facility.

1.01 DESCRIPTION OF WORK

A. The work specified herein includes the abatement, encapsulation, and disposal of ACM/ACCM by qualified persons who are knowledgeable, trained, and certified to perform such work in compliance with all applicable federal, state, and local codes and regulations.

1. Pre-Abatement Tasks

   a. Submit required pre-job submittals prior to mobilization
   b. Construct needed temporary facilities
   c. On-site Individually tested and certify HEPA equipped air filtration devices with 0.3 µm dioctylphthalate (DOP) particles of equivalent challenge testing
   d. Individually fit test each worker with appropriate respiratory protection.
   e. Seal and/or lock-out HVAC supply duct servicing abatement work areas
   f. Install GFI power sources

2. Work Area Preparation

   a. Perform non-asbestos pre-cleaning
   b. Pre-clean work area surfaces affected by asbestos dust, debris, fall-out or contamination.
   c. Prepare work area containment systems as specified
   d. Initiate negative air, HEPA filtration machinery
   e. Construct decontamination facilities as specified
   f. Install magnehelic gage with continuous strip or disc chart recorder
   g. Where necessary, remove and dispose of non-ACM building components, finishes, fixtures, etc. that are scheduled for demolition to access all ACM.

3. Asbestos Abatement Activities

   a. Maintain negative pressure inside of the asbestos abatement work areas for eight hours prior to any ACM removal.
   b. Wet removal all ACM as specified. Where necessary, remove and dispose of non-ACM building components, finishes, fixtures, etc. that are scheduled for demolition to access all ACM.
   c. Detail clean all barriers and work area surfaces.
   d. Following final inspection of the work area, perform encapsulation of all work areas surfaces.
   e. Following visual and final clearance, remove all barriers and check for any residual ACM debris.
   f. Demobilize from site.
   g. Submit all project closeout submittal documents.

4. Asbestos Abatement Scope of Work

   a. The work specified herein includes the removal of various ACM's at the subject site.
   b. The Contractor shall wet remove and dispose of all asbestos-containing building materials as follows:

ACM Description	ACM Location(s)	Approx Quantity
1 Wall/ceiling sheetrock, joint tape and compound	Throughout most (see map)	60,000 sq ft.
2. Tan 12 x 12 vinyl floor tile with black mastic	Auditorium ticket booth	40 sq ft.
3. Gray 9 x 9 vinyl floor tile with non-asbestos mastic	Janitors closet adjacent green room	40 sq ft.
4. Tan 12 x 12 vinyl floor tile (with fissures) with black mastic	• Corridors • Kitchen • Meeting room	3500 sq ft.
5. Gray 9 x 9 vinyl floor tile and black mastic	Main office	1500 sq ft.
6. Black mastic below black 12 x 12 vinyl floor tile	• Lobby • Corridor	2000 sq ft.
7. Beige 12 x 12 vinyl floor tile and black mastic	• Studio A, B and C • Ceramic studio • Storage closet adjacent kitchen	7500 sq ft.
8. White TSI on water pipes	Above ceiling and exposed in art and ceramic studios (air cell)	3000 ln ft.
9. White pipe hanger insulation paper	Throughout above ceiling and exposed in art and ceramic studios	<100 sq ft.
10. Friable gray/black roof felt	Below wood shake and curbed up the sides of roof mounted mechanicals	32,000 sq ft.
11. Gray mastic	For roof mounted mechanicals	10 sq ft

1.02 DEFINITIONS

Abatement - Procedures to control fiber release from asbestos-containing building materials. Includes removal, enclosure or encapsulation.

Aggressive method - means removal or disturbance of building material by sanding, abrading, grinding or other method that breaks, crumbles, or disintegrates intact ACM.

Air Monitoring - The process of measuring the asbestos fiber content of a specific volume of air in a stated period of time using methods approved or recommended by OSHA, EPA, NIOSH or other method approved by Owner or Consultant.

Amended water - means water to which surfactant (wetting agent) has been added to increase the ability of the liquid to penetrate ACM.

Asbestos - includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these minerals that has been chemically treated and/or altered. For purposes of this standard, "asbestos" includes PACM, as defined below.

Asbestos-Containing Building Material (ACBM): Means any construction material that contains greater than 1% asbestos.

Asbestos-Containing Construction Material (ACCM): Means any construction material that contains $^{1}/_{10}$ of 1% to 1% asbestos by weight.

Asbestos-containing material (ACM) - means any material containing more than one percent asbestos.

Assistant Secretary - means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Authorized person - means any person authorized by the employer and required by work duties to be present in regulated areas.

Building/facility owner - is the legal entity, including a lessee, which exercises control over management and record keeping functions relating to a building and/or facility in which activities covered by this standard take place.

Certified Industrial Hygienist (CIH) - means one certified in the practice of industrial hygiene by the American Board of Industrial Hygiene.

Class I asbestos work - means activities involving the removal of TSI and surfacing ACM and PACM.

Class II asbestos work - means activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III asbestos work - means repair and maintenance operations, where "ACM", including-TSI and surfacing, is likely to ACM and PACM, may be disturbed.

Class IV asbestos work - means maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities.

Clean room - means an uncontaminated room having facilities for the storage of employees' street clothing and uncontaminated materials and equipment.

Closely resemble- means that the major workplace conditions which have contributed to the levels of historic asbestos exposure, are no more protective than conditions of the current workplace.

Competent person - means, in addition to the definition in 29 CFR 1926.32 (f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f): in addition, for Class I and Class II work who is specially trained in a training course which meet meets the criteria of EPA's Model Accreditation Plan (40 CFR 763) for supervisor, or its equivalent and, for Class II and Class IV work, who is trained in a manner consistent with EPA requirements for training of local education agency maintenance and custodial staff as set forth at [40 CFR 763.92 (a)(2)].

Consultant - For the purpose of the work described herein, ProTech Consulting and Engineering shall be the Consultant.

Critical barrier - means one or more layers of plastic sealed over all openings into a work area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in a work area from migrating to an adjacent area.

Decontamination area - means an enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area, and clean room, which is used for the decontamination of workers, materials, and equipment that are contaminated with asbestos.

Demolition - means the wrecking or taking out of any load-supporting structural member and any related razing, removing, or stripping of asbestos products.

Director - means the Director, National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

Disturbance - means activities that disrupt the matrix of ACM or PACM, crumble or pulverize ACM or PACM, or generate visible debris from ACM or PACM. This term includes activities that disrupt the matrix of ACM or PACM, render ACM or PACM friable, or generate visible debris. Disturbance includes cutting away small amounts of ACM and PACM, no greater than the amount which can be contained in one standard sized glove bag or waste bag in order to access a building component. In no event shall the amount of ACM or PACM so disturbed exceed that which can be contained in one glove bag or waste bag which shall not exceed 60 inches in length and width.

Employee exposure - means that exposure to airborne asbestos that would occur if the employee were not using respiratory protective equipment.

Equipment room (change room) - means a contaminated room located within the decontamination area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.

Fiber - means a particulate form of asbestos, 5 micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

Glovebag - means not more than a 60 x 60 inch impervious plastic bag-like enclosure affixed around an asbestos-containing material, with glove-like appendages through which material and tools may be handled.

High-efficiency particulate air (HEPA) - filter means a filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter.

Homogeneous area - means an area of surfacing material or thermal system insulation that is uniform in color and texture.

Industrial hygienist - means a professional qualified by education, training, and experience to anticipate, recognize, evaluate and develop controls for occupational health hazards.

Intact - means that the ACM has not crumbled, been pulverized, or otherwise deteriorated so that the asbestos it is no longer likely to be bound with its matrix.

Modification - means a changed or altered procedure, material or component of a control system, which replaces a procedure, material or component of a required system. Omitting a procedure or component, or reducing or diminishing the stringency or strength of a material or component of the control system is not a "modification" for purposes of paragraph (g)(6) of this section.

Negative Initial Exposure Assessment - means a demonstration by the employer, which complies with the criteria in paragraph (f)(2)(iii) of this section, that employee exposure during an operation is expected to be consistently below the PEL.

PACM - means "presumed asbestos containing material".

Permissible Exposure Level (PEL) - A level of airborne fibers specified by OSHA as an occupational exposure standard for asbestos. It is 0.1 fibers per cubic centimeter of air, 8-hour time weighted average, as measured by phase contrast microscopy.
Presumed Asbestos Containing Material - means thermal system insulation and surfacing material found in buildings constructed no later than 1980. The designation of a material as "PACM" may be rebutted pursuant to paragraph (k)(5) of this section.

Project Designer - means a person who has successfully completed the training requirements for an abatement project designer established by 40 U.S.C. Sec. 763.90(g).

Regulated area - means: an area established by the employer to demarcate areas where Class I, II, and III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos, exceed or there is a reasonable possibility they may exceed the permissible exposure limit.

Requirements for regulated areas are set out in paragraph (e) of this section.

Removal - means all operations where ACM, ACCM, ACBM, and/or PACM is taken out or stripped from structures or substrates, and includes demolition operations.

Renovation - means the modifying of any existing structure, or portion thereof.

Repair - means overhauling, rebuilding, reconstructing, or reconditioning of structures or substrates, including encapsulation or other repair of ACM or PACM attached to structures or substrates.

Surfacing material - means material that is sprayed, troweled-on or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).

Surfacing ACM - means surfacing material which contains more than 1% asbestos.

Thermal system insulation (TSI) - means ACM applied to pipes, fittings, boilers, breaching, tanks, ducts or other structural components to prevent heat loss or gain.

Thermal system insulation ACM - is thermal system insulation which contains more than 1% asbestos.

1.03 ASBESTOS HAZARD

A Asbestos-containing material when damaged or disturbed is subject to fiber releases. Wet methods are a primary means of controlling fiber release. Strict compliance with each of the provisions outlined in these specifications for the encapsulation, repair and handling of asbestos-containing material is of great importance, because:

1. The inhalation of airborne asbestos fibers can cause very serious often-fatal diseases.

2. Workers may not be aware they are inhaling asbestos fibers.

3. Symptoms of the diseases do no appear for many years.

4. Only the contractor and his employees can prevent the inhalation of asbestos fibers which can lead to the development of asbestos-related disease.

5. No insurance is available to provide for asbestos related disease.

B. Proposition 65 Notice: Under California Health and Safety Code Sections 25249.5 through 25249.13, asbestos has been listed as a chemical known to the State of California to cause cancer. As a Contractor, you and your employees will be working in areas in which asbestos-containing materials are present. This notice constitutes the warning of the presence of a known carcinogen required by Proposition 65. It is your duty to follow all requirements of Proposition 65.

1.04 CONTRACTOR QUALIFICATIONS

A. Licensing, Certification:
The Contractor shall possess all required licenses, registrations, and credentials to perform the work of this specification. All credentials shall be valid, current and in good standing prior to, and throughout all work performed by Contractor. Credentials shall include but no necessarily be limited to: asbestos license issued by the California State Contractors Licensing Board and Department of Occupational Safety and Health Administration (DOSH asbestos registration).

B. Personnel training:
The work specified herein shall be performed by under the direct management and supervision of a competent person and technicians/workers who are trained, knowledgeable and qualified in the state-of-the-art techniques of asbestos abatement, handling and subsequent cleaning of contaminated areas.

C. Project oversight and supervision:
The Contractor must provide a full-time General Superintendent who is experienced in administration and supervision of asbestos abatement projects including work practices, protective measures for building and personnel, disposal procedures, etc. This person shall be the Contractor's Competent Person as required by 40 CFR Part 763 and OSHA in CCR Title 8, § 1529. The Competent person shall be the Contractor's representative responsible for compliance with all applicable federal, state and local regulations, particularly those relating to asbestos-containing material. This person must have completed a course at an EPA Training Center or equivalent certificate course in asbestos abatement procedures, have had a minimum of two (2) years on-the-job training and meet any additional requirements set forth in CCR Title 8, § 1529 for a Competent Person.

1.05 NOTICES AND RECORD KEEPING

A. Contractor shall maintain for at least thirty (30) years, a record for each asbestos project in which the Contractor engages. Each record shall include the following information: The name, address, and social security number of all personnel involved with the project, the name address and social security number of the OSHA "Competent Person" who will supervise the work, the amount of asbestos material that was removed, repaired, encapsulated or disturbed, the commencement and completion date of the work, copies of Hazardous Waste Manifest(s), personal air monitoring results and any other appropriate information.

B. Special Reports:
Except as otherwise indicated, submit special reports directly to Owner within one day of occurrence requiring special report, with copy to Owner's Representative and others affected by occurrence.

C. Reporting Unusual Events:
When an event of unusual and significant nature occurs at the site (examples: failure of negative pressure system, rupture of temporary enclosures), prepare and submit a special report listing chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. When such events are known or predictable in advance, advise Owner in advance at earliest possible date.

D. Reporting Accidents:
Prepare and submit reports of significant accidents, at site and anywhere else work is in progress. Record and document data and actions; comply with industry standards. For this purpose, a significant accident is defined to include events where personal injury is sustained, or property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury.

E. Daily Logs and Journals:
During the work, Contractor shall maintain a daily log which will be kept at the job site. Items to be included in the daily log shall include but are not limited to the following:

1. Meetings; purpose, attendees, discussions, items of resolution (brief)

2. Visitations; authorized and unauthorized

3. Sign-in sheets of all personnel entering and leaving the work area

5. Personal air monitoring results

1.06 PROJECT SUBMITTALS AND ON SITE DOCUMENTS

A. Pre-Job Submittals:
Before the start of work, submit the following to the Owner's Representative for review. No work shall begin until these submittals have been approved by the Owner or Owner's representative.

1. Work Plan which contains specific information related to site preparation and containment construction, asbestos abatement/removal procedures and hazardous waste handling, load-out and disposal procedures. The Work Plan must also include an Emergency Contingency Plan which, at a minimum, addresses procedures which shall be followed in the event of an accident, breach of containment, power failure, water leakage and fire.

2. Written Respiratory Protection Program that complies with OSHA requirements CCR Title 8, § 1529, CCR subchapter 7 § 5144, CFR 1926.1101 and ANSI Z88.2 -1980 "Practices for Respiratory Protection".

3. Detailed schedule of work to be performed; schedule shall include abatement activities and dates.

4. Waste Transportation and Active Asbestos Waste:
   Submit copies of proof of all EPA, DOT, and DHS, licenses, registrations, and certifications for all hazardous waste haulers and active asbestos waste sites intended for use on this project. Provide the name, address, telephone number, contact for each vendor entity.

5. Personnel Training:
   Provide documentation that certifies the training qualifications of the qualified competent Person and all workers who will be assigned to this project. Personnel training for this project shall comply with the training requirements of 40 CFR Part 763 and CCR Title 8, § 1529.

6. Employee Medical Examinations:
   Provide proof of medical examination conducted within the last 12 months in compliance with OSHA regulations, CCR Title 8, § 1529 for each worker who will be assigned to this project.

7. Notifications:
   Provide documentation that the Contractor has obtained all applicable permits and made required notifications from/to all appropriate regulating agencies, including, but not limited to the CAL/OSHA temporary work-site notification and the BAAQMD NESHAPs notification, and any applicable local agencies.

8. Licenses:
   Submit copies of: valid California State contractors license, California State asbestos certification, DOSH registration and all State and Local licenses and permits necessary to carry out the work of this specification.

9. Material Safety Data Sheets:
   Submit the Material Safety Data Sheet, or equivalent, in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) for materials, chemicals, and supplies proposed for use during the work of this specification.

B. Post-Job Submittals:
   Upon completion of the project, the Contractor shall provide 2 copies of all project documentation to the Owner. Post-job submittals shall be provided for final acceptance of the work by the Owner prior to final payment to the Contractor and normal termination of the Contract. This project documentation should include, but is not limited to:

1. A complete record, certified by the testing laboratory, of all personal air monitoring results with 8-hour TWA data.

2. All hazardous waste manifests and/or waste shipment records documenting the acceptance of all asbestos waste generated during the project from the designated land fill. The contractor must provide documentation that the designated land fill has been made aware that the materials disposed at its site contains asbestos.

3. All field documentation including daily logs, journals, visitors log, DOP test results, special report, etc.

4. Supporting documentation for completion as indicated in these contract documents.

5. Submit a statement showing an accounting of any changes to the Contract Sum.

6. Any and all documents delivered with the pre-job submittal package that that were updated, altered or amended in any way during the project.

7. Employee training, fit test, and medical certificates for any and all personnel who performed work on the project whose certificates were not provided in the pre-job submittal package.

C. On-Site Records
The following records shall be maintained on-site and available for review throughout the entire course of the Work:

1. All pre-job submittal list above.

2. Personal air monitoring results, including 30 minute excursion sampling results and calculated 8 hour TWA exposures for Contractor employees

3. Work Area entry/exit log for each day and each shift of the Work

6. Contractor's IIPP and Hazard Communication Programs

7. Respiratory Protection Program

8. Confined Space Entry Program (if applicable).

9. The contractor will post in a visible place inside or directly outside (as is most convenient) of the clean room a copy of:

- Emergency phone numbers.
- Written work plan and Emergency Contingency Plan.
- Required DOSH postings
- Fire extinguisher locations and inspection data.

1.07 REFERENCE DOCUMENTS

A. All work specified in this document shall conform to the following applicable codes, ordinances, rules, regulations, orders and standards. Where conflicting or overlapping requirements or specifications exist, the more stringent requirements shall apply.

B. The Contractor shall assume full responsibility and liability for the compliance with all applicable Federal, State, and local regulations, standards and guidance documents pertaining to work practices, hauling, disposal, and protection or workers, visitors to the site, and person occupying areas adjacent to the site.

C. Laws and Regulations: Compliance is required with applicable federal, state, municipal, and local regulations, including but not limited to:

1. Federal laws and regulations: Occupational Safety and Health Act, 29 USC 651 et seq., and all applicable Occupational Safety and Health Administration (OSHA) regulations thereunder; Clean Air Act, 42 USC 7401 et seq., and all applicable U.S. Environmental Protection Agency (EPA) regulations thereunder; Hazardous Materials Transportation Act, 49 USC 1801 et seq., and all applicable Department of Transportation (DOT) regulations thereunder.

2. State of California laws and regulations: Hazardous Substances Information and Training Act, Labor Code 6360 et seq.; Labor Code 6401.7, 6408, 6501.5 through 6501.9, 6503.5, 6505.5, 9021.5, 9030; all applicable regulations of the Department of Industrial Relations (DIR) including 8 CCR 340 through 342, 1531, 1509, 3202, 5144, 5156 through 5158, 5194, 5208 and 1529; Hazardous Waste Control Law, Health and Safety Code 25100 et seq., and all applicable Department of Toxic Substances Control (DTSC) regulations thereunder, including 22 CCR Div. 4.5 et seq.; Safe Drinking Water and Toxic Enforcement Act of 1986, Health & Safety Code 25249.5 et seq., and all applicable regulations thereunder, including 22 CCR 12100 et seq.; Bus. & Prof. Code 7058.5 and corresponding regulations, including 16 CCR Ch. 8.

3. Local laws and regulations: Bay Area Air Quality Management District (BAAQMD), Regulation 11, Rule 2.

D. Codes, Standards and Guidance Documents

1. National and State Fire Code, Electrical Code, Plumbing Code, Building Code, and other related codes where applicable.

2. ASTM - American Society for Testing and Materials

3. ANSI - American National Standards Institute

4. ULI - Underwriters Laboratories, Inc.

1.08 CONSULTANT / OWNERS REPRESENTATIVE

At the Owner's option, ProTech Consulting and Engineering may act as The Consultant and will be the Owner's Representative to perform the following:

A. Have free access to all asbestos work areas.

B. To assist in interpretation of procedures.

C. To advise on all provisions of the contract documents pertaining to the control of asbestos.

D. Advise client on work stoppage if a situation presenting a health hazard to workers or Owner's employees or occupants of the building is observed. The Consultant shall not have authority to stop work without the client's approval.

E. To act as Owner's liaison in technical matters involving the asbestos-related work.

F. To perform air sampling inside the asbestos work area during the project. The Contractor shall cooperate fully with Consultant, consultant's agents and employees, and ensure cooperation of his/her workers during collection of air samples and work area inspections.

G. Consultant's role in advising the Owner on environmental health matters does not relieve the Contractor's obligation to comply with all applicable Federal, State, and local regulations, standards and guidance documents. Air monitoring results generated by Consultant shall not be used by the Contractor to represent compliance with regulatory agency requirements for monitoring of worker's exposure to airborne asbestos, nor shall any other activity on the part of Consultant represent the Contractor's compliance with applicable health and safety regulations.

PART 2 - MATERIALS AND EQUIPMENT

2.00 MATERIALS

A. The Contractor shall provide all materials and equipment necessary to complete the Work in accordance with applicable regulations and this Specification. Equipment shall be free of asbestos-contamination resulting from use at previous job sites.

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

C. Store all materials subject to damage off the ground, away from wet or damp surfaces, and under cover sufficient to prevent damage of contamination. Damaged or deteriorating materials shall not be used and shall be removed from the premises. Materials that become contaminated shall be disposed of in accordance with this specification and applicable regulations.

D. All enclosures shall be constructed of non-combustible materials. Rigid barriers, if applicable, shall have a minimum fire rating of 1 hour.

E. The use of chemicals to remove asbestos-containing mastics or adhesives may not be a terpene based solvent.

F. Ground Fault Circuit Interrupters shall be used on all equipment and temporary circuits.

G. Electrical extension cords shall be of appropriate rigidity and gauge for intended use and shall have an operative ground prong.

H. Electrical outlets and extension cords shall be provided by the Contractor for the purpose of air monitoring by the Owner or Owner's Representative. The Owner or Owner's Representative shall specify where the electrical outlets are needed, both inside and outside of the Regulated Area. Two electrical outlets shall be provided per designated area.

I. Contractor shall have on-site at all times a minimum of one 2A, 10 B:C (or larger) fire extinguisher. For large work areas, Contractor shall provide one fire extinguisher per 10,000 sq. ft, and locate fire extinguishers no further than 75 feet apart, starting from decontamination area entry way. The fire extinguishers shall have been inspected and certified as operative within the past 12 months.

J. The Contractor shall supply a fully stocked First Aid Kit in a visible place inside or directly outside (as is most convenient) of the clean room. The First Aid Kit shall remain on the job site at all times.

K. Adhesive tape shall be capable of sealing joints of adjacent sheet of polyethylene and for use in attachment of polyethylene sheet to finished or unfinished surfaces of similar materials and shall be capable of adhering under dry and wet conditions, including use of amended water.

L. Protective devices such as, but not limited to, disposable clothing, respirators, gloves, hard hats, etc. shall be used.

M. Encapsulant materials shall be the bridging and penetrating type and conform to the following characteristics:

    1. Encapsulants shall not be solvent-based or utilize a hydrocarbon in the liquid in which the solid parts of the encapsulant are suspended.

    2. Encapsulant shall not be flammable.

N. Spray Cement: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.

O. Polyethylene waste bags/containers shall be at least 6 mil's thick. All waste containers shall be leak-tight and bare appropriate labeling as required by this specification and/or applicable regulatory requirements.

2.01 TOOLS AND EQUIPMENT

A. Provide suitable tools for removal of asbestos-containing materials and encapsulations of substrate as required.

B. Provide sufficient number of HEPA-filtered vacuum cleaners equipped with pick-up adapters, steel floor wands, crevice tools, and carpet tools.

C. Airless sprayers capable of spraying amended water shall be provided in sufficient number to allow continuous uninterrupted work.

D. Asbestos filtration devices shall utilize high efficiency particulate air (HEPA) filtration systems.

E. Transportation equipment, as required, shall be suitable for loading, temporary storage, and unloading of contaminated waste without exposure to persons or property, and shall be quiet in motion if used within the building.

PART 3 - EXECUTION

3.00 PROHIBITED ACTIVITIES

A. The following work practices and engineering controls are prohibited and shall not be used under any circumstances:

1. High-speed abrasive disc saws that are not equipped at point of cut with HEPA filtered exhaust devices.

2. Compressed air used to removed asbestos, unless the compressed air is used in conjunction with an enclosed HEPA filtered ventilation system designed to capture the dust cloud created by the compressed air.

3. Dry sweeping, shoveling or other dry clean-up of dust and debris containing asbestos.

4. Employee rotation as a means of reducing employee exposure to asbestos.

B. Smoking, eating, drinking, applying cosmetics and chewing tobacco in regulated areas is prohibited. Hot work is prohibited unless authorized by Owner.

3.01 PERSONAL PROTECTION

A. Because there is no known safe level of exposure to asbestos, it is prudent to reduce worker's exposure to as low a level as possible. Proper respiratory protection is critical in minimizing exposure. No worker shall be exposed to levels greater than 0.01 f/cc over an 8 hour time weighted average as determined by the protection factor of the respirator worn and the work area fiber concentration. In any event, respirator selection shall comply with the minimum requirements required by DOSH per CCR Title 8, § 1529. The following table has been included to aid in determining the proper level of respiratory protection.

Airborne concentration of fibrous dust	Required respirator
Not in excess of 1 f/cc (10 X PEL), or otherwise as required independent of exposure pursuant to (h)(2)(iv)	Half-mask air purifying respirator other than a disposable respirator, equipped with high efficiency filters.
Not in excess of 5 f/cc (50 X PEL)	Full facepiece air-purifying respirator equipped with high efficiency filters.
Not in excess of 10 f/cc (1000 X PEL)	Any powered air-purifying respirator equipped with high efficiency filters or any supplied air respirator operated in continuous flow mode.
Not in excess of 100 f/cc (1,000 X PEL)	Full facepiece supplied air respirator operated in pressure demand mode.
Greater than 100 f/cc (1,000 X PEL) or unknown concentration	Full facepiece supplied air respirator operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus.

B. The Contractor shall provide each employee with personally issued respirators equipped with high efficiency particulate filters. Respirators shall be approved by NIOSH to be worn in the designated work area and/or whenever a potential exposure to asbestos exists. A sufficient supply of filters shall be provided for replacement as required by the workers or applicable regulations. Disposable respirators shall not be used.

C. The Contractor shall provide medical examinations for all employees who may encounter an airborne fiber level of 0.1 f/cc or greater for an eight-hour time-weighted average. In the absence of specific airborne fiber data, provide medical examinations for all workers who will enter the work area and who will be required to ware respiratory protection for reason. Examinations shall meet OSHA requirements as set forth in CCR Title 8, § 1529.

D. The Contractor shall require that a respirator be worn by any person in any regulated work area. Respirators shall be worn at all times, regardless of activity until the area has been cleared for re-occupancy.

E. During encapsulation operations or usage of other organic base aerosols (e.g., spray glue, expanding foam), workers shall be provided with combination cartridges consisting of organic vapor and HEPA section.

F. The use of single-use, disposable, or quarter-face respirators for any purpose shall be prohibited.

G. Fit Testing: Provide initial fitting of respiratory protection during a respiratory protection course of training as per CCR Title 8, § 1529. Fit the type(s) of respirator(s) to be actually worn by each individual. Allow an individual to use only those respirators for which he/she has been trained and fitted.

H. Additional Protective Equipment:

1. Coveralls: Provide disposable full-body coveralls and disposable head covers, and require that they be worn by all workers in the work area. Provide a sufficient number for all required changes, for all workers in the work area.

2. Boots: Provide work boots with non-skid soles, for all workers. Provide boots at no cost to workers. Do not allow boots to be removed from the work area for any reason, after being contaminated with asbestos-containing material. Dispose of boots as asbestos contaminated waste at the end of the work.

3. Goggles: Provide eye protective (goggles) as required by OSHA for all workers involved in scraping, spraying, or any other activity which may potentially cause eye injury.

4. Gloves: Provide work gloves to all workers whose work may require protection of the hands and require that they be worn in the work area. Do not remove gloves from work area and dispose of as asbestos contaminated waste at the end of the work.

5. Respirators, disposable coveralls, head covers, and footwear covers shall be provided by the contractor for the Owner, Owner's Representative, Project Administrator, and other authorized representatives who may inspect the job site. Provide two (2) respirators and six (6) complete coveralls and, where applicable, six (6) respirator filter changes per day.

3.02 AIR MONITORING

A. Compliance Air Monitoring:
   1. Personal air monitoring "Exposure Monitoring". should be performed by the contractor as required to meet OSHA requirements as required by CCR Title 8, § 1529. Maintain an average airborne fiber counts within the regulated work area as follows:

Type of Work	*Fiber Counts Standard*
Work performed within a full negative pressure enclosure system.	0.5 fibers per cubic centimeter (f/cc) over an 8 hour Time Weighted Average (TWA)
Work performed in a regulated area but not in a full negative pressure enclosure system.	0.1 fibers per cubic centimeter (f/cc) over an 8 hour Time Weighted Average (TWA)
Work performed in open areas – glovebag removal, roof abatement, exterior siding removal, etc.	0.01 fibers per cubic centimeter (f/cc) over an 8 hour Time Weighted Average (TWA)

   2. If the Time Weighted Average (TWA) fiber count for any work shift or 8 hour period exceeds the standard specified above, stop all work, leave pressure differential system in operation and notify Owner's Representative. Do not recommence work until authorized in writing by Owner's Representative.

B. Environmental Air Monitoring:

   1. At the Owner's option, the Owner's representative will conduct environmental monitoring as the Owner's Representative and as the Owner's Air Sampling Specialist throughout the course of the project. The purpose of environmental (area) air monitoring by the Owner's Representative will be to detect faults in the work area isolation.

   2. If any air samples taken outside of the work area exceeds 0.01 fibers/CC or are statistically higher than pre-abatement air samples, the Contractor shall immediately and automatically stop all work. If >0.01 f/cc air samples were taken inside the building and outside of critical barriers around the work area immediately erect new critical barriers to isolate the affected area from the balance of the building. Erect Critical Barriers at the next existing structural isolation of the involved space (e.g. wall, ceiling, floor, etc.). Decontaminate the affected area in accordance with this specification. Leave critical barriers in place until final visual and air clearance is given. Perform all such required cleaning or decontamination at no additional cost to the Owner.

3. The contractor shall maintain an average airborne fiber count inside of the abatement work area of less than 0.1 fibers/CC. If fiber counts rise above this figure for any sample taken, revise work procedures to lower fiber counts. If the time-weighted average (TWA) fiber count for any work shift or eight-hour period exceeds 0.1 fiber/CC, stop all work, leave negative air system in operation and notify Owner's Representative. Do not recommence work until authorization in given in writing by the Owner's Representative.

C. Clearance Air Monitoring:

1. Following visual clearance of work areas by the Owner's Representative, air sample will be taken to determine compliance with work area clearance standards. Work areas will be considered cleared when the following criterion are met:

	Air Sample Analysis - Type	*Clearance Standard*
a.	Transmission Electron Microscopy (TEM) **collected under aggressive conditions.**	less than 70 s/mm^2
b.	Open-air abatement	Visual inspection only

2. The contractor may conduct his own air monitoring and laboratory testing if he elects to do so. The cost of such air monitoring and laboratory testing shall be at the contractor's expense.

3.03 SAFETY PROCEDURES FOR POWER AND LIGHTING

A. The use of wet methods for removal, repair, encapsulation or cleaning procedures increases the potential for electrical shock when working around electrical panels, conduit, light fixtures, alarm systems, junction boxes, transformers, etc. In coordination with the Owner, de-energize as much electrical equipment as possible to prevent electrical shock to employees performing the work. The Contractor shall use the following precautions:

1. Use non-conductive tools and vacuum attachments.

2. Utilize "hot line" covers over energized cables and power lines when possible.

3. Ensure all electrical equipment in use is properly grounded before the job starts. Check outlets, wiring, extension cords and power pickups.

4. Avoid stringing wiring across floors. Elevate wiring if possible.

5. Ensure electrical outlets are tightly sealed and taped to avoid water spray.

6. Determine operating voltages of equipment and lines before working on or near energized parts.

7. Energized parts must be insulated or guarded from employee contact and other conductive objects. Extension cords must be three-wire type and connected to a Ground Fault Interrupter (GFI) circuit.

8. Lock or secure de-energized circuits at panel and post warning signs.

3.04 TEMPORARY FACILITIES

A. Use qualified tradesmen for installation of temporary services and facilities. Locate temporary services and facilities where they will serve the entire project adequately and result in minimum interference with the performance of the work and operations of the building.

B. Relocate, modify and extend services and facilities as required during the course of work so as to accommodate the entire work of the project. Provide new or used materials and equipment that are undamaged, clean and in serviceable condition. Provide only materials and equipment that are recognized as being suitable for the intended use, by compliance with appropriate standards.

1. Electrical
   Temporary electrical services (if required) shall comply with applicable NEMA, NECA and UL standards and governing regulations for materials and layout of temporary electric service. Provide receptacle outlets equipped with ground fault circuit interrupters, reset button and pilot light, for plug-in connection of power tools and equipment. Use only grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Use single lengths or use waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas of work.

2. Fire Protection
   Contractor shall have on-site at all times a minimum of one 2A, 10 B:C (or larger) fire extinguisher. For large work areas, Contractor shall provide one fire extinguisher per 10,000 sq. ft, and locate fire extinguishers no further than 75 feet apart, starting from decontamination area entry way. The fire extinguishers shall have been inspected and certified as operative within the past 12 months.

3. General
   At the completion of abatement work, clean all construction aids within the work area and/or wrap in one layer of 6 mil polyethylene sheet and seal before removal from the work area.

3.05 CONTROL WORK AREA ACCESS

A. The area where asbestos abatement work takes place in considered an asbestos contaminated area. The contaminated work area must be isolated from the balance of the building and decontaminated at the completion of the asbestos control work. Critical barriers shall be constructed by applying a double layer of 6 mil plastic sheeting, in an airtight fashion, over all penetrations into and out of the asbestos work area. Penetrations shall include, but are not limited to all doors, openings, holes, penetrations, windows, vents, and drains.

B. Permit Access to the work area only through the Decontamination Unit. All other means of access shall be closed off and sealed and warning signs displayed on the clean side of the sealed access.

C. Warning signs that demarcate the regulated area shall be posted in accordance with Title 8, CCR, Section 1529 (k) (6). Signs shall be posted at all work area entrance and on the public side of all work area barriers that may be accessible to otherwise unknowing persons. Warning signs shall be posted in locations that would allow any person to read the signs from any approach to the work area. The warning signs shall bear the following language:

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

D. Visual Barrier: Where the work area is immediately adjacent to or within view of the public, provide a visual barrier of opaque polyethylene sheeting at least 4 mil in thickness so that the work procedures are not visible to building occupants. Where this visual barrier would block

natural light, substitute frosted sheet plastic in locations approved by the Owner's Representative.

3.06 WORK AREA PREPARATION

A. Work Area

1. The abatement contractor must completely isolate the work area from other parts of the building so as to prevent asbestos-containing dust or debris from passing beyond the isolated/regulated area.

2. All movable items of furnishings, equipment, etc., shall be secured in a clean uncontaminated room and covered with plastic sheeting. All non-movable items to be left in place shall be covered with 6 mil. polyethylene sheeting and sealed with duct tape.

B. HVAC System

1. Where possible, disable Ventilating Systems or any other system bringing air into or out of the work area. Disable system by disconnecting wires, removing circuit breakers, by lockable switch or other positive means that will prevent accidental premature restarting of equipment.

2. Isolate the Heating Ventilating and Air Conditioning (HVAC) systems to prevent airflow into or out of the work area. Seal all openings to ducts, fans, louvers, plenums, etc. with two layers of 6 mil. polyethylene sheeting and duct tape. Shut-down and isolation of the HVAC system prior to the start of any asbestos disturbance work. Contractor shall repair any damage to duct work, grilles, dampers, louvers or other HVAC equipment at the completion of the work.

3. HVAC equipment openings which can not be properly sealed (due to forced air pressure) with polyethylene sheeting and duct tape. Will be hard sealed using 1/4 inch plywood or equivalent and mechanically sealed over air flow openings. Covered all hard sealed HVAC openings with two layers of 6 mil. polyethylene sheeting and duct tape

C. Pre-Cleaning

1. General (non-asbestos) Pre-Cleaning
Perform a general pre-cleaning of the entire work area prior to and following work areas set-up and containment so that it is generally free of non-asbestos trash, plastic, cardboard, debris, and gross amounts dust, etc. The work area shall be as clean as possible to give abatement workers an unencumbered working environment and limit the amount of asbestos waste to be disposed of.

2. Asbestos Pre-Cleaning
Pre-clean all surfaces that have been affected by asbestos dust, debris, fall-out or contamination. Pre-cleaning shall include HEPA vacuuming and wet wiping of all affected surfaces.

D. Class I Abatement - Glovebag Removal of Asbestos Insulation Products

1. Glovebags shall be made of 6 mil thick plastic and shall be seamless at the bottom.

2. Glovebags used on elbows and other connections must be designed for that purpose and used without modifications.

3. Work practices:
   a. Place need tools in the glove bag.

   b. Each glovebag shall be installed so that it completely covers the circumference of pipe or other structure where the work is to be performed. Glove bags shall be installed in accordance with the manufacturers instructions.

   c. Install and seal glovebags so that each bag creates its own leak-tight mini-containment around the asbestos section to be removed.

   d. Glovebags shall be smoke –tested for leaks and any leaks sealed prior to use.

   e. Glovebags may be used only once in its originally installed location - bags may not be moved or reused.

   f. Glovebags shall not be used on surfaces whose temperature exceeds 150oF

   g. Use a HEPA vacuum cleaner or other device to created negative pressure within the glovebag. HEPA vacuum cleaner shall run continually during the operation.

   h. Perform gross removal, detail cleaning, final cleaning, and encapsulation within the glovebag. The glovebag and surfaces within the glove bag shall be sufficiently clean so the no asbestos fibers are released when the glovebag is removed from the pipe.

   i. Following removal, detail cleaning, and encapsulation (and prior to disposal) the bag shall be collapsed by evacuating the air within the bag using a HEPA vacuum.

   j. Seal exposed insulation ends with approved canvas jacket and lagging materials to ensure that all exposed-raw asbestos is covered, sealed, and protected.

   k. At least two persons shall perform Class I glovebag removal operations.

E. Asbestos Roofing Material

1. Critical barriers shall be constructed by applying a double layer of 6 mil plastic sheeting, in an airtight fashion, over all openings within, and proximate to, the Work Area including but not limited to: HVAC air intakes, vents, and penetrations.

2. Windows located on the floor below the roof shall be closed and remain closed during abatement activities. Contractor shall coordinate with Owner as to scheduling window closure. The attic must be protected from asbestos debris falling through the roof wood slats. If necessary, the attic area needs to be isolated and contained to stop roof debris contamination inside of the building. This roofing felt is friable and does not contain asphalt.

3. If applicable, perimeter railing, barriers or other protective measures shall be installed to protect Contractor employees and visitors and to prevent roofing debris from falling over the edge of the roof.

4. Wet methods shall be used to remove roofing materials that are not intact, or that will be rendered not intact during removal, unless such wet methods are not feasible or will create safety hazards. Adequately wet asbestos- containing materials to be removed prior to stripping and/or tooling to reduce fiber dispersal into the air. Accomplish wetting by a fine spray (mist) of amended water or removal encapsulant. Saturate material sufficiently to wet to the substrate without causing excess dripping. Allow time for water or

removal encapsulant to penetrate material thoroughly. If amended water is used, spray material repeatedly during the work process to maintain a continuously wet condition.

5. Cutting machines shall be continuously misted during use, unless a competent person determines that misting substantially decreases worker safety.

6. When removing built-up roofs with asbestos-containing roofing felts using a power roof cutter, all dust resulting from the cutting operation shall be collected by a HEPA dust collector, or shall be HEPA vacuumed by vacuuming along the cut line. When removing built-up roofs with asbestos-containing roofing felts and a smooth surface using a power roof cutter, the dust resulting from the cutting operation shall be collected either by a HEPA dust collector or HEPA vacuuming along the cut line, or by gently sweeping and then carefully and completely wiping up the still-wet dust and debris left along the cut line. The dust and debris shall be immediately bagged or placed in covered containers.

7. Any debris generated during removal shall be promptly cleaned-up and packaged in leak-tight containers.

8. Asbestos-containing material that has been removed from a roof shall NOT be dropped or thrown to the ground. Unless the material is carried or passed to the ground by hand, it shall be lowered to the ground via crane; hoist; or covered, dust-tight chute utilizing negative air and HEPA equipment:

9. Any ACM that is not intact shall be lowered to the ground as soon as is practicable, but in any event no later than the end of the work shift. While the material remains on the roof it shall either be kept wet, placed in an impermeable waste bag, or wrapped in plastic sheeting.

10. Intact ACM shall be lowered to the ground as soon as is practicable, but in any event no later than the end of the work shift.

11. Upon being lowered, unwrapped material shall be transferred to a closed receptacle in such manner so as to preclude the dispersion of dust.

F. Class II Materials – Resilient Flooring, Mastic, Sheetrock:

1. Resilient Flooring Materials

   a. Critical barriers shall be constructed by applying a double layer of 6 mil plastic sheeting, in an airtight fashion, over all penetrations into the Work Area. Penetrations shall include, but are not limited to all entryways, windows, vents and drains. In addition to plastic sheeting, rigid cover plates may be required on HVAC supply and return vents or other HVAC air duct openings located within the Regulated Area.

   b. A double layer of 6 mil plastic sheeting shall be installed on all Work Area wall surfaces. The plastic shall extend from the flooring surface interface up to a minimum of half the wall height and all edges of the plastic shall be sealed in an airtight fashion with duct tape or equivalent materials.

   c. An Equipment Room constructed of 6 mil plastic or equivalent with air locks consisting of double layers of plastic sheeting shall be connected to the Work Area for personnel entry/exit. The Equipment Room shall be equipped with labeled waste bags for disposal of contaminated protective clothing.

d. A sufficient number of HEPA filtered air machines shall be installed within the Work Area to maintain a pressure differential of minus 0.03 column inches of water across the critical barriers at all times and a minimum of 4 air changes per hour. Air machines shall be placed in a configuration which allows thorough ventilation of the Work Area and movement of contaminated air away from the breathing zone of abatement workers. Air machine exhaust shall be directed outside of buildings, where applicable, and away from occupied areas. Exact location(s) of air machine exhaust shall be arranged between Owner or Owner's Representative and Contractor prior to start of work.

e. A manometer equipped with a 24 hour recorder shall be installed to continuously monitor pressure differential inside the Work Area. Air machines shall remain in operation 24 hours a day until final clearance of the Work Area has been achieved.

f. Electric circuits located within the Work Area shall be sealed with plastic, deactivated or equipped with ground-fault circuit interrupters.

g. Where it is not feasible to establish a containment as described above, or when all work is performed outside of buildings, a substitute containment which meets the purpose and intent of a full containment may be constructed if the substitute containment is in compliance with all applicable regulatory requirements and approved by Owner.

3.07 PRESSURE DIFFERENTIAL SYSTEM

A. The contractor shall supply sufficient number of HEPA air filtration devises (AFD) units to continually maintain a pressure differential across all barriers of minus 0.03 column inches of water. The contractor shall demonstrate that the negative air pressure standard can be maintained throughout project duration. No gross removal of asbestos materials may be initiated until negative air pressure is maintained for a period of eight hours.

B. A manometer equipped with a 24 hour disc recorder shall be installed to continuously monitor pressure differential inside of the asbestos work area. Air filtration machines shall remain in operation 24-hours a day until final clearance of the work area has been achieved.

C. No work involving the removal or disturbance of asbestos shall commence until the specified negative pressure level is met and maintained for a period of two (2) hours.

D. AFD(s) shall be operated and maintained in accordance with the manufacturers specifications and guidelines. Proper operation shall include appropriate use and maintenance of the two stage pre-filter and primary HEPA filtration system.

E. Negative Air exhaust: Locate exhaust unit(s) so that makeup air enters work area primarily through decontamination facilities and traverses work area as much as possible.

F. To the extent feasible, vent all AFD exhaust to the outside of building. The Contractor shall ensure that AFD exhaust does not spill directly into occupied areas.

G. Star operation of HEPA filtered AFD fan units before beginning work (before any asbestos containing material is disturbed). After abatement work has begun, run units continuously to maintain a constant negative pressure until decontamination of the work area is complete. Do not turn off units at the end of the work shift or when abatement operations temporarily stop. Do not shut down pressured differential air system during encapsulating procedures, unless authorized by the Consultant in writing.

H. Post Abatement: Prior to final air testing, remove pre-filter and wipe out inside lip of HEPA filtered fan unit.

I. When a final inspection and the results of final air tests indicate that the area has been decontaminated, exhaust units may be removed from the work area. Before removal from the work area, remove and properly dispose of pre-filter, and seal intake to the machine with 6 mil polyethylene to prevent environmental contamination from the filters.

J. Each filter shall be individually tested on site and certified to have an efficiency of not less than 99.97% when challenged with 0.3 µm dioctylphthalate (DOP) particles (or equivalent media). Testing shall be conducted in accordance with Military Standard Number 282 and Army Instructional Manual 136-300-175 A (or equivalent method). Each filter shall bear a UL586 label to indicate ability to perform under specified conditions. A copy of this section shall supplied to the test conductor.

3.08 ASBESTOS ABATEMENT

A. The Contractor shall:

1. Clearly mark and label all emergency exits located within the Regulated Area. Emergency exits shall be kept free of obstructions at all times. A razor knife or other cutting tool shall be posted in the vicinity of each emergency exit located within the Regulated Area and used to facilitate quick exit of the Work Area in an emergency situation.

2. Receive authorization from the Owner or Owner's Representative prior to initiating any asbestos removal activity. Owner or Owner's Representative shall conduct a pre-abatement inspection to ensure compliance with the Specification prior to authorizing start of any asbestos removal activities.

3. Inspect the integrity of all Regulated Area barriers and smoke test for leaks at the beginning of each shift. Any detected leaks shall be sealed prior to start of work.

4. Maintain a log of all personnel entering the Regulated Area. The Contractor shall not allow any person to enter the Regulated Area without prior approval of Owner or Owner's Representative. This includes Contractor employees newly assigned to the job site.

5. Provide authorized visitors with protective clothing, whenever they are required to enter the Regulated Area.

6. Ensure that each worker and authorized visitor shall follow the approved procedures established by the Contractor and the Owner.

7. Perform all work regardless of exposure using:

   a. HEPA vacuum cleaners
   b. wet methods
   c. Prompt clean-up and disposal of asbestos in leak-tight containers

8. Remove all existing asbestos-containing building materials as identified in the project scope of work as follows:

   a. Adequately wet asbestos- containing materials to be removed prior to stripping and/or tooling to reduce fiber dispersal into the air. Accomplish wetting by a fine spray (mist) of amended water or removal encapsulant.

   b. Saturate material sufficiently to wet to the substrate without causing excess dripping. Allow time for water or removal encapsulant to penetrate material thoroughly.

c. Spray material repeatedly during the work process to maintain a continuously wet condition.

d. Mist work area continuously with amended water whenever necessary to reduce airborne fiber levels.

e. Waste shall be packaged prior to each break and at the end of each shift. If applicable, Contractor shall make arrangements with Owner to store ACM waste in a secured area until waste can be removed from the job site.

9. Ensure that the level of respiratory protection worn by Contractor's employees is adequate to protect the employees from exposure to airborne asbestos fibers above the Permissible Exposure Limits.

10. Ensure airborne asbestos fiber levels inside the Work Area do not exceed a ceiling limit of 1 fiber per cubic centimeter (f/cc), as determined by personal or area air sampling, regardless of the level of respiratory protection worn by Contractors employees. If this level is exceeded, Contractor shall take immediate action to reduce airborne fiber concentrations. If this level is exceeded for 2 consecutive shifts, the Contractor shall cease asbestos removal operations and perform necessary clean-up to reduce the airborne asbestos fiber level to below 0.2 f/cc as indicated by subsequent air samplings.

11. Conduct personal exposure monitoring and provide monitoring results within 24 hours after samples are collected to Owner or Owner's Representative.

12. Notify Owner or Owner's representative immediately in the event of a breach of the containment barrier or spill of ACM outside of the Regulated Area. Take protective measures to ensure occupants adjacent to the spill or breach are not exposed to asbestos.

13. In the event of a breach of the containment barrier or spill of ACM outside of the Regulated Area, immediately stop work, repair the breach and clean-up the spilled material using wet methods and HEPA vacuuming.

14. In the event that a non-work area becomes contaminated with asbestos, the Contractor shall immediately and automatically stop all work. If the contaminated area is inside the building and outside of critical barriers, the Contractor shall erect new critical barriers to isolate the affected area from the balance of the building. Erect Critical Barriers at the next existing structural isolation of the involved space (e.g. wall, ceiling, floor, etc.). Decontaminate the affected area in accordance with this specification. Leave critical barriers in place until final visual and air clearance is given.

15. That Contractor shall perform all required cleaning and/or decontamination at no additional cost to the Owner.

16. Shall not encapsulate abated surfaces until the work area has passed final inspection as determined by the Owner or Owner's Representative.

3.09 ENTERING THE WORK AREA

A. Worker decontamination enclosures shall be provided at all location(s) where workers enter or exit the work area. These enclosures will be placed at the most strategic location(s) to allow easy access and usage while maintaining the ability to secure the building during non working hours. The decontamination enclosure unit shall be constructed of ridged materials capable of withstanding crew usage without deterioration for the entire duration of the project.

B. The decontamination unit will consist of at least a clean room, a shower room, and an equipment room. Each room shall be constructed of materials that are leak-tight and air-tight. Each room shall be connected in succession separated by 6 mil polyethylene air locks. Access between any two rooms in the decontamination unit will be through air locks with at least 3 feet separating each curtained door way. The decontamination unit system must fit into an entrance and be sealed in air-tight into the critical barrier system.

1. Clean Room: The clean room will be sized to accommodate the size of the work crew. If lockers are not available storage of the workers personal equipment and street clothing, the contractor may use plastic bags. The contractor must keep the change area clean and dry. Do not allow shower overflow water in the change room. Damp wipe all surfaces twice after each shift with a disinfectant.

2. Shower Room: The shower room shall be constructed with a minimum of a single shower or what ever is adequate for the size of the work crew. Each shower head shall be supplied with hot and cold water. The shower shall be constructed to prevent leakage.

   a. Install a totally submersible waterproof sump pump with a integral float switch inside the collection water pan. Provide sump pump size to pump twice the flow capacity of all showers or hoses supplying the water to the sump. Install a sump capable of pumping debris, sand, plaster or other materials which may wash off during decontamination procedures.

   b. The contractor must install a filtering system for removing contaminants from the drained water. The system must have as a two stage cascading filtering system capable of filtering down to **5 µm or smaller.** Filtered water may then be disposed of into the sanitary sewer.

   c. The contractor shall maintain a supply of filters for the filtering system. The filters will be changed as often as needed to prevent the system from clogging.

3. Equipment/Dirty Room: The equipment room will be used for storage of tools and equipment. Workers will remove dirty protective clothing in this space.

C. Require all workers to adhere to the following personal decontamination procedures whenever they leave the work area. Waste and equipment leaving the abatement area must also be decontaminated in the same manner. Upon entering the asbestos abatement project, **remove street clothes** in the clean change room and put on a respirator and clean protective clothing before entering the equipment room or work area. Before exiting the work area, the following procedures are required;

1. Remove gross contamination from clothing.

2. Proceed to the equipment room and remove all clothing except the respirator.

3. Deposit contaminated clothing in labeled disposal container.

4. Still wearing the respirator, proceed naked to the shower and clean the outside of the respirator with soap and water while showering.

5. Remove respirator.

6. Thoroughly wash and shampoo hair and body.

7. Remove filters from respirator, if breathing has becomes restricted or as often as the user feels is needful. Dispose of the filter elements in the container supplied for this purpose.

8. Wash and rinse the inside of the respirator.

9. Following showering and drying off, proceed directly to the clean change room and put on street cloths

10. Contaminated footwear shall be stored in the equipment room or disposed of as contaminated waste or cleaned thoroughly inside and out using soap and water before removing from the shower area.

3.10 PACKAGING, LABELING, AND DISPOSAL OF ASBESTOS WASTE

A. It is the responsibility of the Contractor to comply with current Federal, State and local regulations concerning the waste handling, transportation, and disposal of ACM/ACCM.

B. Asbestos Waste Packaging

1. All ACM/ACCM and ACM/ACCM-contaminated materials, supplies, clothing, debris, etc. shall adequately wetted and be placed into leak-proof disposal containers.

2. Personal protective equipment (PPE) i.e. suites/coveralls, respirator cartridges, etc. shall be packaged, labeled, and disposed of with the asbestos removed during use of the PPE.

3. All friable and non-friable asbestos waste shall be thoroughly wetted with amended water and placed in a clear, 6 mil pre-labeled asbestos waste bag, goosenecked and sealed with duct tape. The bag shall then be placed into another 6 mil pre-labeled asbestos waste bag, also goosenecked and taped. Labeling shall conform to Title 8, CCR, Section 1529.

4. Mastic removal solvent shall not be combined with other asbestos-containing waste. Contractor shall ensure that drummed mastic solvent waste contains no free standing liquid.

C. Labeling

1. Asbestos disposal containers to be labeled as follows:

a. All ACM containing waste shall be labeled:

DANGER

CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

b. In addition, all Hazardous ACM waste shall include:

HAZARDOUS WASTE

STATE AND FEDERAL LAW
PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST
POLICE OR PUBLIC SAFETY
AUTHORITY OR THE CALIFORNIA
DEPARTMENT HAVE
TOXIC SUBSTANCE CONTROL

Generator's Name
Address
Manifest No.

RQ, Asbestos, 9, NA2212, III

Cal/EPA & DOT Diamond Label

D. Disposal

1. Obtain any required permits and provide any required notices to the appropriate federal, state and local EPA agencies.

2. Waste manifest forms and/or waste shipment records shall be provided by the Contractor and include all information required by law.

3. Carefully load containerized waste on sealed trucks or other appropriate vehicles for transport. Exercise care before and during transport, to insure that no unauthorized persons have access to the material. Take bags from the work area directly to a sealed truck or dumpster

4. Asbestos-containing hazardous waste materials shall be transported in a completely enclosed shipping container, open truck beds with tarpoline covers are not allowed unless first loaded in sealed drums. Double bagged material may be transported on open trucks if they are loaded in sealed drums. Label drums with same warning labels as bags. Uncontaminated drums may be reused. Treat drums that have been contaminated as asbestos-containing waste and dispose of in accordance with this specification. If the waste shipment consists of non-friable, non-hazardous waste only, the materials may be transported to other than Class II waste sites.

5. Advise the sanitary landfill operator at least twenty-four hours in advance of transport of the quantity of friable and non-friable asbestos material to be delivered.

6. Waste water from wet stripping, shower room, and worker and equipment decontamination systems shall be filtered through a filtration treatment system capable of removing all particles 5 microns or greater in size before it is discharged into the sanitary sewer system.

7. At the burial site sealed plastic bags may be carefully dumped from the truck. If bags are broken or damaged leave bags of ACM waste in the truck and clean entire truck and contents using procedures set forth earlier in these documents.

8. Submit copies of all manifests, waste shipment records, and landfill receipts to Owner.

3.11 PROJECT DECONTAMINATION

A. Work of This Section includes the decontamination of all surfaces of the work area, all equipment in the Work Area and the air in the Work Area which may have been contaminated during abatement activities or which may previously have had elevated fiber counts due to friable asbestos-containing materials in the space.

1. Carry out a final cleaning of all surfaces within the abatement work area including items of tools, scaffolding and/or staging equipment. Use of damp cleaning methods and mopping, and/or a High Efficiency Particulate Air (HEPA) Filtered vacuum shall be used.

2. Do not perform dry dusting or dry sweeping.

3. Use each surface of a cleaning cloth one time only and then dispose of as contaminated waste.

4. Remove unneeded tools and equipment from the abatement work area via the decontamination unit. Ensure that all equipment leaving the work area has been decontaminated and wrapped in 4 mil plastic sheeting.

B. Following a visual inspection by the Owner's representative perform encapsulation of the abatement area. Abated substrate is to be encapsulated with a white pigmented bridging encapsulant. Apply encapsulant using an airless sprayer in accordance with the manufacturers recommendations. Apply encapsulant liberally over the abated surfaces sufficient to completely cover all areas affected by the work.

C. Maintain negative air pressure for 24 hours to allow negative air machines to clean air of airborne asbestos fibers. Before final air monitoring remove pre-filters and wipe out inside lip of HEPA filtered fan unit.

3.12 FINAL CLEARANCE

A. The Owners Representative shall conduct a final inspection of the work area upon completion of all abatement and clean-up tasks. The contractor shall notify the Owner or Owner's Representative at least 24 hours in advance of the project completion.

B. The Contractor shall not encapsulate abated surfaces until the work area has passed final inspection as determined by the Owner's representative. The Owner's Representative shall inspect work area surfaces for asbestos residue and debris. If any such debris, residue, dust or other matter is found repeat final cleaning and continue decontamination procedure at no additional cost to the owner.

C. Following successful completion of final inspection, the Contractor shall apply an encapsulating agent to all abated surfaces. The Owner's Representative will not conduct final air clearance sampling until the encapsulating agent is completely dry.

D. The Owner's Representative shall conduct aggressive final air clearance as specified and notify the Contractor of results in a timely fashion. In the event that air clearance in not achieved, the Contractor shall re-clean and re-encapsulate the work areas prior to final clearance retake. All costs and fees associated with re-cleaning and re-testing of the work area will be paid by the Contractor.

E. Upon successful completion of final air clearance, as determined by the Owner's Representative, the Contractor shall remove all remaining equipment and plastic sheeting from the work area and restore the abatement work areas and all affected areas to pre-abatement conditions. Any small quantities of residual material found upon removal of the plastic sheeting shall be removed with a HEPA filtered vacuum cleaner and local area protection. If significant quantities, as determined by the Owner's Representative, are found then the entire area affected shall be decontaminated as specified herein.

END OF SECTION

ProTech
Consulting & Engineering

1208 Main Street, Redwood City, CA 94063
(650) 569-4020 Fax (650) 569-4023

Date: December 31, 2010
Report #: **1024-MA10**

LIMITED SCOPE ENVIRONMENTAL CONSULTING SERVICES

PRE-DEMOLITION/RENOVATION ASBESTOS SURVEY AND EVALUATION

PROJECT:

Peninsula Art Center
1313 Newell
Palo Alto, California

PREPARED FOR:

Mr. Hung Nguyen
City of Palo Alto
Palo Alto, California

PREPARED BY:

PROTECH CONSULTING AND ENGINEERING

Emanuel Dounias
DOSH Certified Site Surveillance Technician
Certificate No.: **00-2766**

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ASBESTOS BUILDING SURVEY REPORT

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INTRODUCTION

On December 20, 2010, ProTech Consulting and Engineering performed a limited scope hazardous materials survey. ProTech's hazardous materials consulting services were conducted at the request of The City of Palo Alto, California. Consulting services were performed in preparation for planned demolition and renovation work.

PROJECT NAME	Peninsula Art Center
PROJECT LOCATION	1313 Newell, Palo Alto, California
FACILITY TYPE	Art Center

Certified Staff:
Environmental consulting services were performed by ProTech's team of licensed and accredited inspectors as follows:

CONSULTANT	DISCIPLINE	ISSUING AGENCY	CERTIFICATION NO.
Ron Mason	Asbestos Lead IAQ	Cal OSHA CDPH EAA	96-1903 198 1-10-03
Emanuel Dounias	Asbestos Lead	Cal OSHA CDPH	00-2766 13059
Bob Newman	Asbestos IAQ	Cal OSHA UC Berkley	00-2767 10-03

CONSULTING SCOPE OF SERVICES

Consulting services were limited by the client to the following scope of services:

SERVICE REQUESTED

- Inspect the site to identify, inventory, and catalog visibly accessible suspect asbestos-containing materials (ACM);
- Collect samples of suspect ACM for laboratory analysis;
- Process and submit suspect ACM samples for laboratory analysis by standard polarized light microscopy (PLM) to determine asbestos content;
- Assess the friability and abatement classification of identified ACM;
- Identify the approximate location of each ACM;
- Make general recommendations as appropriate.

ELEMENT(S) INVESTIGATED	Limited to Asbestos
AREA(S) REQUESTED	Entire facility
SCOPE LIMITATIONS & EXCLUSIONS	• Samples were not collected of suspect asbestos materials whose functional or aesthetic integrity needed to be preserved. Un-sampled items included: - Kilns in Ceramic Studio

SCOPE OF WORK NOTES

Limitations were established by the Client to include items of interest and concern to the Client. ProTech is only responsible for the specific scope of work agreed to. No other services are intended or implied

SAMPLE RESULTS & ASBESTOS REGULATORY ASSESSMENT

The following tables summarize information about each suspect asbestos-containing material including sample number(s), and laboratory results (**Asbestos types are abbreviated as follows:** Chr = Chrysotile; Amo = Amosite; Cro = Crocidolite; Tre = Tremolite; Act = Actinolite).

Asbestos-Containing Materials ACM

	Material Description	Material Location(s)	Sample Numbers	Results Asbestos %	Regulatory Assessment DOSH	Regulatory Assessment EPA / AQMD	Approx. Quantity
2	Tan 12 x 12 vinyl floor tile with streaks	Auditorium ticket booth	28	2% Chry	Class II Abatement	Non-friable	40 sq ft total
2B	Black mastic below tan 12 x 12 vinyl floor tile with streaks	Auditorium ticket booth	28B	5% Chry	Class II Abatement	Non-friable	
3	Gray 9 x 9 vinyl floor tile with non-asbestos mastic	Janitors closet adjacent green room	29	10% Chry	Class II Abatement	Non-friable	40 sq ft total
4	Tan 12 x 12 vinyl floor tile (with fissures)	• Corridors • Kitchen • Meeting room	30, 31, 32	2% Chry	Class II Abatement	Non-friable	3500 sq ft total
4B	Black mastic below tan 12 x 12 vinyl floor tile (with fissures)	• Corridors • Kitchen • Meeting room	30B, 31B, 32B	None detected to 5% Chry	Class II Abatement	Non-friable	
5	Gray 9 x 9 vinyl floor tile	Main office	33	10% Chry	Class II Abatement	Non-friable	1500 sq ft total
5B	Black mastic below gray 9 x 9 vinyl floor tile	Main office	33B	2% Chry	Class II Abatement	Non-friable	
6	Black mastic below black 12 x 12 vinyl floor tile	• Lobby • Corridor	38B, 39B	5% Chry	Class II Abatement	Non-friable	2000 sq ft
7	Beige 12 x 12 vinyl floor tile	• Studio A, B and C • Ceramic studio • Storage closet adjacent kitchen	40, 41, 42	2% Chry	Class II Abatement	Non-friable	7500 sq ft. total
7B	Black mastic below beige 12 x 12 vinyl floor tile	• Studio A, B and C • Ceramic studio • Storage closet adjacent kitchen	40B, 41B, 42B	5% Chry	Class II Abatement	Non-friable	

8	White TSI on water pipes	Above ceiling and exposed in art and ceramic studios (air cell)	53, 54, 55	80% Chry	Class I Abatement	Friable RACM	3000 ln ft.
9	White pipe hanger insulation paper	throughout	62	80% Chry	Class I Abatement	Friable RACM	<100 sq ft observed
10	Gray/Black roof felt	Below wood shake and curbed up the sides of roof mounted mechanicals	65, 66, 67, 68, 69, 70, 71	60% Chry	Class I Abatement	Friable RACM	32,000 sq ft.
11	Gray mastic	For roof mounted mechanicals	72*, 73, 74	None detected to 2% Chry	Class II Abatement	Non-friable	10 sq ft

* No asbestos detected in sample

Less Than 1% Asbestos Materials - Continued

The following materials were confirmed to contain less than 1% asbestos by 400 PLM point count analysis:

	Material Description	Material Location(s)	Sample Numbers	Results Asbestos %	Regulatory Assessment DOSH	Regulatory Assessment EPA / AQMD	Approx. Quantity
1	White drywall mixed with brick and wood	Throughout – See map for locations	01, 02, 03*, 04, 05, 06, 07*, 08, 09	None detected to <1% Chry	Class II Abatement	Non-friable	60,000 sq ft

* Sheetrock with 1 or more layers containing greater than 1% asbestos: Cal OSHA class II abatement rules apply because at least one of the composite layers contains greater than 1% asbestos – Cal OSHA does not accept composite sampling.

Non-Asbestos Materials

No asbestos was found in the following materials:

	Material Description	Material Location(s)	Sample Numbers
1.	Drywall with topping mud	Ceramic studio restrooms	10
2	White topping mud	Ceramic studio restrooms	11
3	White 2 x 2' nailed up ceiling tiles	Corridors restrooms	12, 13, 14, 15, 16
4	Tan/brown 1' x 1' glued ceiling tiles with brown mastic (with fissures)	Basement workshop	17, 18
5	Tan/brown 1 x 1 glued up ceiling tiles with brown mastic (rough texture) mixed with 17 & 18		19, 20

6	Gray 1 x 1' glued up ceiling tiles with mastic with fissures	Lobby corridor	21, 22
7	Brown baseboard mastic	Throughout	23, 24, 25
8	Black parquet floor mastic	• Auditorium • Stage • Art • Technology studio	26, 27
9	Black mastic below gray 9 x 9 vinyl floor tile with mastic	Janitors closet adjacent green room	29B
10	Yellow residual carpet mastic	• Rear office • Green room	34, 35
11	Black residual mastic	Main gallery below carpet squares	36, 37
12	Black 12 x 12 vinyl floor tile	• Lobby • Corridor	38, 39
13	Pink 12 x 12 vinyl floor tile	Project look studio	43
14	Black mastic below pink 12 x 12 vinyl floor tile	Project look studio	43B
15	Tan cork 9 x 9 tile with brown mastic	Glass gallery	44
16	Gray ceramic tile mortar	Floors for restrooms	45, 46
17	Gray ceramic tile mortar (Also found in janitor closet)	Walls for restrooms with green 4 x 12 green wall tiles	47, 48
18	Tan ceramic tile mortar	Walls for restrooms adjacent meeting room	49, 50
19	Gray ceramic tile mortar	For top layer of ceramic floor tile in restrooms adjacent meeting room	51, 52
20	White TSI elbows	On other air cell and fiberglass wrapped pipes	56, 57, 58
21	Beige HVAC duct seam tape	Over fiberglass and aluminum jacket	59, 60, 61
22	Tan insulation bricks	Observed in pipe chases between walls	63, 64
23	Gray exterior window glazing	Exterior	75, 76, 77, 78, 79

INTERPRETATION OF RESULTS

Results Categories

Samples collected during this survey were submitted to a certified laboratory for analysis by standard polarized light microscopy (PLM). PLM sample results fell in to 1 of 3 categories as follows:

RESULT CATEGORIES	EXPLANATION	REGULATORY IMPACT
1. Asbestos Containing Material (ACM)	Material containing greater than 1% asbestos.	Is subject to all regulatory standards.
2. Less than 1% asbestos (<1%)	May be treated as <1% if confirmation sampling is performed. Confirmation analysis must be performed by PLM 400 point-counted or better method.	If <1% is confirmed then: • EPA and AQMD treat <1% asbestos as **non-asbestos**. • Cal OSHA has <1% asbestos removal and handling standards that must be followed.
3. None Detected (ND)	No asbestos detected during PLM analysis.	Not regulated.

Positive and Negative (conflicting) Sample Results

The EPA has a specific protocol for sampling suspect asbestos building materials. In general, it recommends collecting multiple samples (often a minimum of three) samples of suspect asbestos materials. Multiple samples are recommended by the EPA to increase the statistical reliability of the results and to minimize the potential for error.

Sometimes, multiple samples representing a particular material will yield both positive and negative results. When this happens, the negative sample result(s) are superseded by the positive results. **Once a single positive sample is identified, the material represented by the sampling is treated as an asbestos-containing material.**

However, if additional sampling data, as-built plans, or other reliable data can adequately explain or confirm that area(s) testing positive are different (not homogeneous) from areas that tested negative, this information can be used to more accurately quantify ACM and define the scope of an asbestos abatement job.

Special Rules for Drywall:
The US Environmental Protection Agency (EPA) and most local air quality management districts (AQMD) allow composite analysis of drywall; joint tape and joint compound (components mixed together/homogenized when analyzed). Drywall, joint tape and joint compound are the only materials that can be composited. The EPA and AQMD's rationale is that joint compound is an integral part of the drywall and cannot be removed independently. However, they do not extend this rationale to any other material or layered systems. **All other materials must be analyzed layer-by-layer as dictated by**

the regulatory standards.

The EPA and AQMD consider wall/ceiling skim coat texturing (topping mud/texture other than joint compound) that are applied to drywall surfaces to be "add-on" materials. Add-on materials are not treated like joint compound. Add-on materials (when present) require separate analysis independent of the drywall. In other words, **add-on materials cannot be composited with drywall during analysis.**

Cal OSHA does NOT allow composite sampling in any case - not even drywall/joint compound. Cal OSHA requires that all layers of a sample be analyzed and reported separately.

ASBESTOS ASSESSMENT NOTES

Cal OSHA (DOSH) Assessment Notes

Asbestos-Containing Material (ACM): A material is an asbestos containing material (ACM) when the sample aggregate or any one of its layers (analyzed individually) contains greater than 1% asbestos. Cal OSHA does **not** allow composite analysis (mixing layers of materials together).

Less than 1% Asbestos: Materials containing less than 1% asbestos are not regulated by most governmental agencies. However, Cal OSHA is not one of those agencies. The Cal OSHA asbestos standard must be followed for work involving materials that contain a concentration of asbestos as low as **0.1%.**

If a material can be shown to contain less than 1% asbestos by PLM point count (or other approved method), it can be treated as an asbestos-containing construction material (ACCM). ACCM is a term Cal OSHA uses to describe materials containing **less than 1%** (but greater than 0.1%) asbestos. In certain situations, there may be some economic advantages to making this characterization. The decision to do so is evaluated on a case-by-case basis at the client's request.

Less than 0.1% Asbestos: If a material can be shown to contain less than **0.1%** asbestos by an approved method, it can be treated as a non-asbestos material. In certain situations, there may be some economic advantages to making this characterization. The decision to do so is evaluated on a case-by-case basis at the client's request.

Class I Asbestos Work: Cal OSHA prescribes specific work practices involving the removal of asbestos-containing insulation and surfacing (i.e. sprayed-on) materials.

Class II Asbestos Work: Cal OSHA prescribes specific work practices involving the removal of ACM which is not insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing, cement products, and construction mastics.

EPA/AQMD Assessment Notes

Asbestos-Containing Material (ACM): Any building material which contains commercial asbestos in an amount greater than 1%.

Less than 1% Asbestos: Materials that are found to contain less than 1% asbestos by standard polarized light microscopy (PLM) may be considered non-asbestos (by EPA/AQMD) if confirmation analysis is performed. To be treated as a non-asbestos material, the EPA and AQMD require analytical verification by PLM Point Count (or better). This verification is required because the standard PLM analysis is not sensitive enough to accurately determine asbestos content at or below 1%. In certain situations, there may be some cost advantages to making this characterization. The decision to do so is evaluated on a case-by-case basis at the client's request.

Regulated Asbestos-Containing Material (RACM): RACM includes friable (easily crumbled) ACM, or Category I nonfriable ACM that has or will become friable or that has been subjected to sanding, drilling, grinding, cutting, or abrading, or Category II nonfriable ACM that may become or has become crumbled, pulverized, or reduced to powder.

Friable: Materials that can be crumbled, pulverized, or reduced to powder, when dry, by hand pressure.

Non-Friable: Materials that **cannot** be easily crumbled, pulverized, or reduced to powder, when dry, by hand pressure. Non-friable materials are categorized by EPA/AQMD as follows:

- *Category I Nonfriable ACM:* Asbestos-containing packings, gaskets, resilient floor coverings, mastics and asphalt roofing products.

- *Category II Nonfriable ACM:* Asbestos-containing material, excluding Category I nonfriable asbestos-containing material, that, when dry, and in its present form, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

CONCLUSIONS & RECOMMENDATIONS

Asbestos Removal

In accordance with local, state, and federal asbestos regulations, any ACM that may be impacted during demolition should be removed prior to those destructive activities. In preparation for asbestos removal, ProTech recommends that the following steps be taken:

1. **Scope of Work and Project Specification**
   ProTech will prepare a document (specification) to enable an apples-to-apples asbestos abatement bidding process. The specification will define the abatement scope of work and set forth the guidelines for proper and cost effective asbestos removal. ProTech will price this service upon request.

2. **Bid Review and Contractor Selection**
   ProTech will assist the client or manage the selection of qualified asbestos abatement contractors. ProTech will price this service upon request.

3. **Project Management/Monitoring**
   ProTech will provide quality control oversight and monitoring of the asbestos abatement operation to ensure regulatory compliance. ProTech will price this service upon request.

4. **Project Clearance**
   ProTech will conduct final visual inspections and clearance air monitoring to certify that industry clearance standards are met. ProTech will price this service upon request.

ProTech will provide a fee proposal for additional analysis at the client's request.

Other Environmental Issues

ProTech's work was limited to an asbestos survey. The potential for environmental conditions other than the presence of asbestos is possible. Other potential hazards that could potentially impact the project include but are not limited to:

1. Mold growth
2. Lead-based paint
3. PCB-containing equipment
4. Mercury containing equipment
5. Chemical supplies

ProTech will provide a fee proposal for additional inspection services at the client's request

DISCUSSION

Asbestos & Its Uses

Asbestos is a term that refers to a group of naturally occurring fibrous minerals. Because of their resistance to decay and their remarkable insulating properties, asbestos fibers have been incorporated into thousands of products and materials. Collectively these products are frequently referred to as asbestos-containing materials (ACM). Many types of ACM have been used in the construction of buildings and homes. ACM types are generally put into one of three classifications, they are:

1. Surfacing materials

Surfacing materials are those products which have been sprayed or trowelled onto ceilings, walls and other structural elements. (E.g. fireproofing, thermal insulation or decoration) Because of the type of mixture used in the construction industry, these

materials are commonly *friable*, that is they are easily crushed or reduced to powder form with hand pressure.

2. Thermal systems insulation (TSI)
The insulation applied to mechanical systems, hot water pipes and heating ducts often contains asbestos. Hot water pipes and heating systems are covered with asbestos insulation primarily to prevent heat loss and to protect other nearby surfaces from the hot pipes. Much of this asbestos insulation was manufactured from 1920 to 1972, and it was used in construction until 1978.

3. Miscellaneous
Miscellaneous ACM materials include all asbestos products which cannot be classified as either surfacing material or TSI. These materials are usually non-friable and generally do not release asbestos fibers into the air unless damaged. Products such as floor tile, mastic, roofing material and concrete asbestos products are examples of miscellaneous ACM.

Asbestos Regulations

The following is a summary of select major state and federal asbestos regulations. These summaries are not intended to be a comprehensive discussion of the specific regulations. In addition, this summary is not an all-inclusive overview of the asbestos regulatory universe.

Division of Occupational Safety And Health (Cal-OSHA) – Title 8 CCR § 1529
On July 2, 1996 Cal-OSHA implemented revised general industry and construction asbestos standards which apply to all occupational exposure to asbestos. The new Cal-OSHA construction standard requires owners of buildings built prior to 1981 to presume that a variety of building materials contain asbestos unless they are sampled and proved to not contain asbestos. Employers whose employees work in these same buildings face the same responsibility to either test materials or treat them as ACM.

The standard describes four classes of asbestos-related work: I) removal of asbestos thermal systems insulation and surfacing materials, II) removal of asbestos material which are not thermal systems insulation or surfacing materials, III) repair and maintenance operations where small amounts of asbestos or presumed asbestos (PACM) is likely to be disturbed, and IV) maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste, and debris resulting from Class I, II, and III activities. For each class, OSHA specifies the type of training, work practices, air sampling, and personal protection required of the employer and worker. This new regulation is a jobs-based standard. Specific notifications and work practices are required if asbestos will be disturbed.

EPA's NESHAP Regulation – 40 CFR Part 61, Subpart M
NESHAP requires building owners to inspect a building for asbestos prior to renovation or demolition. The EPA must be notified in advance of all demolition (whether there is asbestos present or not) and if more than 160 square feet, 260 linear feet, or 35 cubic feet of Regulated Asbestos Containing Materials (RACM) are going to be disturbed during renovation. RACM must be removed before any demolition or renovation work disturbs

it. Specific work practices must be followed during the removal of RACM. RACM must be adequately wet when disturbed and must remain wet until placed in leak-proof containers. No visible emissions are allowed during collection, packaging, transportation, or disposal of RACM. Records must be kept regarding the transportation and disposal of RACM.

The federal NESHAP regulation is enforced by the local air quality management district (AQMD). The EPA has "delegated" NESHAP enforcement to these local agencies. Each AQMD has developed an enforcement regulation based on the NESHAP regulation, and in many instances these local regulations are more stringent then the Federal EPA NESHAP regulation.

EXCLUSIONS & REPORT LIMITATIONS

- This asbestos inspection report has been prepared by ProTech for the exclusive use of ProTech and its client, and not for use by any other party. The investigation and sampling plan discussed in this report may not be appropriate for uses beyond its intended purpose and stated scope. Any use by a third party of any of the information contained in this report shall be at their own risk and shall constitute a release and an agreement to defend and indemnify ProTech from any and all liability in connection therewith whether arising out of ProTech's negligence or otherwise.

- Consulting services performed by ProTech were limited to an asbestos survey. No other services were requested by the client. Lead inspection & assessments, PCB investigations, hazardous material audits, mold/indoor air quality investigations, Phase I & II site assessments, and other general environmental consulting are additional services routinely performed by ProTech. These services were not performed at this site. A general environmental audit may be performed to assess the need for additional environmental consulting services.

- The information contained in this report is limited to those areas and suspect asbestos materials found to be visually accessible through reasonable means. No demolition of building materials was conducted to determine the presence of asbestos in wall cavities, chases or other inaccessible areas. ProTech cannot warrant that this building does not contain ACM in locations that were inaccessible, hidden or unknown. However, a good faith effort was made to conduct a comprehensive survey within the limitations of the stated scope of services. This report presents a complete record of all significant findings, evaluations and sample results.

- ProTech cannot warrant that this building does not contain ACM in locations other than those noted in this report. If suspect asbestos materials are discovered during future repairs, demolition or renovation operations, all general work activities which could impact the discovered suspect ACM should cease until confirmation sampling and/or asbestos abatement options can be assessed.

- ProTech's evaluations do not attempt to forecast or anticipate planned or unforeseen events which may negatively impact ACM condition. All conclusions and recommendations presented herein are based on visible conditions present at the time of inspection. Changes in material condition due to deterioration, unforeseen accidents, or planned events such as renovation or demolition may render the recommendations and conclusions presented in this report obsolete.

- All quantification of ACM is approximate and should not be relied upon for bidding purposes. This report is not represented as, nor intended to be, an asbestos-abatement scope of work or project specification.

- Reasonable efforts were made to examine below carpeted areas and resilient floor coverings to determine and quantify the presence of suspect asbestos materials. ProTech accepts no liability for additional materials or under-reporting of asbestos materials which exist below other floor coverings.

- Glass fiber insulated mechanical systems were inspected as completely as possibly without destroying the integrity of the glass fiber insulation. The condition and presence or absence of asbestos associated with mechanical systems is assumed to be consistent with those areas exposed and examined during our inspection. However, ProTech does not guarantee that this is the case.

- Because this survey was conducted in an **occupied building,** intrusive inspection methods were limited. Specific care and caution were observed to avoid significant aesthetic impact on building materials and finishes during inspection services and sample collection. In some cases, additional sampling may be necessary if future demolition or renovation activities uncover additional suspect asbestos materials.

SURVEY METHODOLOGY

Inspection & Sample Collection

A survey of the subject site was conducted to identify and catalog visibly accessible suspect asbestos materials and to develop a sampling strategy for characterizing ACM. Following the initial inspection, samples were collected of suspect asbestos materials from each homogenous sample area. Samples were collected by misting small sample areas with water, then cutting or scraping the sample from the substrate with an appropriate sampling tool. Whenever possible, samples were collected from areas previously damaged or deteriorating. No building systems, components, or structures were demolished to obtain samples of potentially hidden ACM.

Each suspect bulk sample was sealed in its own Zip-lock plastic container and labeled with a unique identification number. Sampling tools were individually cleaned before and after each sample was collected to avoid sample cross contamination. Decontamination was accomplished using single-use, pre-moistened cloths.

Sample information was recorded on ProTech's chain-of-custody form. This form accompanied the samples to a laboratory possessing accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP). Samples were submitted to Forensic Analytical Services, Inc. of Hayward, California.

Sample Analysis

Bulk sample analysis was conducted in accordance with the EPA interim method for determination of asbestos in bulk materials. Samples were first examined by a stereoscopic microscope for determination of homogeneity and preliminary evaluation of composition and presence of fibers. Fibers observed during this examination were then mounted in various refractive index oils and examined in polarized light. During this examination, all minerals and/or man-made materials were identified and the percentages of each were estimated and/or counted.

Evaluation of Asbestos-Containing Materials

In evaluating each asbestos material, the adhesion of the asbestos material to the underlying substrate, deterioration, and damage from vandalism or any other cause was assessed. Evidence of debris on horizontal surfaces, hanging material, dislodged chunks, scraping, indentations, cracking, etc. would be indicators of poor material condition.

Accidental or deliberate physical contact with asbestos materials can result in damage. Inspectors looked for any evidence that asbestos-containing materials had been disturbed. Indicators such as: finger marks in the material, graffiti, pieces dislodged or missing, scraping marks from movable equipment, or furniture, or an accumulation of suspect asbestos dust or debris on floors, shelves, or other horizontal surfaces indicate poor material condition.

Asbestos-containing materials may deteriorate as a result of either the quality of the installation or environmental factors which affect the cohesive strength of the asbestos-containing material or the strength of the adhesion to the substrate. Deterioration can result in an accumulation of dust on the surface of the asbestos-containing material, delamination of the material, or an adhesive failure of the material where it pulls away from the substrate and either hangs loosely or falls to the floor and exposes the substrate. Inspectors touch the asbestos-containing material to determine if dust is released when the material is lightly brushed or rubbed.

Bulk Asbestos Point Count Analysis

(NESHAP Final Rule, 40 CFR, Part 61)

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: N003319
Date Received: 12/20/10
Date Analyzed: 01/18/11
Date Printed: 01/18/11

Job ID/Site: 1313 Newell, Palto Alto, PO#1220-1024-79

FALI Job ID: 1454
Total Samples Submitted: 7
Total Samples Analyzed: 7

Sample Preparation and Analysis:

The NESHAP Final Rule does not define the preparation method for multi-layered samples. In order to determine the composite quantity of asbestos, the volume percent of each layer is determined, the asbestos containing layers are analyzed by point counting and the composite quantity of asbestos is calculated. The NESHAP Final Rule can not be applied to matrices that dissolve in refractive index liquid. This includes tar, mastic or adhesive typically found on the back of floor tiles. According to the NESHAP Final Rule, point count data is only necessary when the visual estimate of asbestos is below 10%.

Sample ID	Lab Number	Layer Description
1	11062012	**Composite of ALL Layers** White Drywall Off-White Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	< 1

Asbestos type(s) detected: Chrysotile

Composite percentage of asbestos in entire sample: **<1.0**
Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

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Sample ID	Lab Number	Layer Description
2	11062013	**Composite of ALL Layers** White Drywall Off-White Joint Compound Off-White Tape Off-White Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	< 1

Asbestos type(s) detected: Chrysotile

Composite percentage of asbestos in entire sample: **<1.0**
Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

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Sample ID	Lab Number	Layer Description
4	11062015	**Composite of ALL Layers** White Drywall Off-White Joint Compound Off-White Tape Off-White Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	< 1

Asbestos type(s) detected: Chrysotile

Composite percentage of asbestos in entire sample: **<1.0**
Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

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Sample ID	Lab Number	Layer Description
5	11062016	**Composite of ALL Layers** White Drywall Off-White Joint Compound Off-White Tape Off-White Joint Compound Tan Adhesive Tan Woven Material

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	< 1

Asbestos type(s) detected: Chrysotile

Composite percentage of asbestos in entire sample: **<1.0**
Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

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Total Samples Analyzed: 7

Sample Preparation and Analysis:

The NESHAP Final Rule does not define the preparation method for multi-layered samples. In order to determine the composite quantity of asbestos, the volume percent of each layer is determined, the asbestos containing layers are analyzed by point counting and the composite quantity of asbestos is calculated. The NESHAP Final Rule can not be applied to matrices that dissolve in refractive index liquid. This includes tar, mastic or adhesive typically found on the back of floor tiles. According to the NESHAP Final Rule, point count data is only necessary when the visual estimate of asbestos is below 10%.

Sample ID	Lab Number	Layer Description
6	11062017	**Composite of ALL Layers** White Drywall Off-White Joint Compound Off-White Tape Off-White Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	< 1

Asbestos type(s) detected: Chrysotile

Composite percentage of asbestos in entire sample: **<1.0**
Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

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FALI Job ID: 1454
Total Samples Submitted: 7
Total Samples Analyzed: 7

Sample Preparation and Analysis:

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Sample ID	Lab Number	Layer Description
8	11062019	**Composite of ALL Layers** White Drywall Off-White Joint Compound Off-White Tape Off-White Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	< 1

Asbestos type(s) detected: Chrysotile

Composite percentage of asbestos in entire sample: **<1.0**
Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

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Job ID/Site: 1313 Newell, Palto Alto, PO#1220-1024-79

FALI Job ID: 1454
Total Samples Submitted: 7
Total Samples Analyzed: 7

Sample Preparation and Analysis:

The NESHAP Final Rule does not define the preparation method for multi-layered samples. In order to determine the composite quantity of asbestos, the volume percent of each layer is determined, the asbestos containing layers are analyzed by point counting and the composite quantity of asbestos is calculated. The NESHAP Final Rule can not be applied to matrices that dissolve in refractive index liquid. This includes tar, mastic or adhesive typically found on the back of floor tiles. According to the NESHAP Final Rule, point count data is only necessary when the visual estimate of asbestos is below 10%.

Sample ID	Lab Number	Layer Description
9	11062020	**Composite of ALL Layers** White Drywall Off-White Joint Compound Off-White Tape Off-White Joint Compound Paint

Point Count Results:

Number of asbestos points counted:	0
Number of non-empty points:	400
Layer percentage of entire sample:	100
Percent asbestos in layer:	< 1

Asbestos type(s) detected: Chrysotile

Composite percentage of asbestos in entire sample: **<1.0**
Comment: Asbestos was detected but no points were counted due to counting criteria. Therefore quantitation deemed to be < 1%.

Note: Point count results are reported to the nearest percent per EPA method.

James Flores, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification (LOQ) = 1%. Trace denotes the presence of asbestos below the LOQ. ND = None Detected.

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Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: B143188
Date Received: 12/20/10
Date Analyzed: 12/22/10
Date Printed: 12/22/10
First Reported: 12/22/10

Job ID/Site: 1313 Newell, Palto Alto, PO#1220-1024-79

Date(s) Collected: 12/20/2010

FALI Job ID: 1454
Total Samples Submitted: 79
Total Samples Analyzed: 79

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
1	11062012						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							
2	11062013						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Off-White Tape			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							
3	11062014						
Layer: White Drywall			**ND**				
Layer: Multi-Layer Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (20 %) Fibrous Glass (10 %)							
4	11062015						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Off-White Tape			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							

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Report Number: B143188

Client Name: Protech Consulting & Engineers Inc. **Date Printed:** 12/22/10

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
5	11062016						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Off-White Tape			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Tan Adhesive			**ND**				
Layer: Tan Woven Material			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							
6	11062017						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Off-White Tape			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							
7	11062018						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound			**ND**				
Layer: Off-White Tape			**ND**				
Layer: Off-White Joint Compound			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (20 %) Fibrous Glass (10 %)							
8	11062019						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Off-White Tape			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							
9	11062020						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Off-White Tape			**ND**				
Layer: Off-White Joint Compound		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (Trace)**					
Cellulose (20 %) Fibrous Glass (10 %)							

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Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
10	11062021						
Layer: White Drywall			**ND**				
Layer: Off-White Joint Compound			**ND**				
Layer: Off-White Tape			**ND**				
Layer: Off-White Texture			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (20 %) Fibrous Glass (10 %)		**Asbestos (ND)**					
11	11062022						
Layer: White Texture			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
12	11062023						
Layer: Tan Fibrous Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (95 %)		**Asbestos (ND)**					
13	11062024						
Layer: Tan Fibrous Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (95 %)		**Asbestos (ND)**					
14	11062025						
Layer: Tan Fibrous Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (95 %)		**Asbestos (ND)**					
15	11062026						
Layer: Tan Fibrous Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (95 %)		**Asbestos (ND)**					
16	11062027						
Layer: Tan Fibrous Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (95 %)		**Asbestos (ND)**					
17	11062028						
Layer: Tan Fibrous Material			**ND**				
Layer: Paint			**ND**				
Layer: Brown Mastic			**ND**				
Total Composite Values of Fibrous Components: Cellulose (85 %)		**Asbestos (ND)**					

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Client Name: Protech Consulting & Engineers Inc.

Report Number: B143188
Date Printed: 12/22/10

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
18	11062029						
Layer: Tan Fibrous Material			**ND**				
Layer: Paint			**ND**				
Layer: Brown Mastic			**ND**				
Total Composite Values of Fibrous Components: Cellulose (85 %)		**Asbestos (ND)**					
19	11062030						
Layer: Tan Fibrous Material			**ND**				
Layer: Paint			**ND**				
Layer: Brown Mastic			**ND**				
Total Composite Values of Fibrous Components: Cellulose (85 %)		**Asbestos (ND)**					
20	11062031						
Layer: Tan Fibrous Material			**ND**				
Layer: Paint			**ND**				
Layer: Brown Mastic			**ND**				
Total Composite Values of Fibrous Components: Cellulose (85 %)		**Asbestos (ND)**					
21	11062032						
Layer: Tan Fibrous Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (35 %) Fibrous Glass (45 %)		**Asbestos (ND)**					
22	11062033						
Layer: Tan Fibrous Material			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: Cellulose (35 %) Fibrous Glass (45 %)		**Asbestos (ND)**					
23	11062034						
Layer: Brown Mastic			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace) Talc (5 %)		**Asbestos (ND)**					
24	11062035						
Layer: Brown Mastic			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace) Talc (5 %)		**Asbestos (ND)**					
25	11062036						
Layer: Brown Mastic			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace) Wollastonite (2 %) Talc (5 %)		**Asbestos (ND)**					

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Report Number: B143188
Client Name: Protech Consulting & Engineers Inc. **Date Printed:** 12/22/10

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
26	11062037						
Layer: Black Mastic			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (Trace)							
27	11062038						
Layer: Black Mastic			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (Trace)							
28	11062039						
Layer: Tan Tile		Chrysotile	**2 %**				
Layer: Black Mastic		Chrysotile	**5 %**				
Total Composite Values of Fibrous Components: **Asbestos (2%)**							
Cellulose (Trace)							
29	11062040						
Layer: Grey Tile		Chrysotile	**10 %**				
Layer: Black Mastic			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (10%)**							
Cellulose (Trace)							
30	11062041						
Layer: Tan Tile		Chrysotile	**2 %**				
Layer: Black Mastic		Chrysotile	**5 %**				
Total Composite Values of Fibrous Components: **Asbestos (2%)**							
Cellulose (Trace)							
31	11062042						
Layer: Tan Tile		Chrysotile	**2 %**				
Layer: Black Mastic			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (2%)**							
Cellulose (Trace)							
32	11062043						
Layer: Tan Tile		Chrysotile	**2 %**				
Layer: Black Mastic			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (2%)**							
Cellulose (Trace)							
33	11062044						
Layer: Grey Tile		Chrysotile	**10 %**				
Layer: Black Mastic		Chrysotile	**2 %**				
Total Composite Values of Fibrous Components: **Asbestos (10%)**							
Cellulose (Trace)							
34	11062045						
Layer: Yellow Mastic			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (Trace) Synthetic (Trace)							

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Client Name: Protech Consulting & Engineers Inc.

Report Number: B143188
Date Printed: 12/22/10

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
35	11062046						
Layer: Yellow Mastic			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (Trace) Synthetic (Trace)							
36	11062047						
Layer: Black Mastic			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (Trace) Synthetic (Trace)							
37	11062048						
Layer: Black Mastic			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (Trace) Synthetic (Trace)							
38	11062049						
Layer: Black Tile			**ND**				
Layer: Black Mastic		Chrysotile	**5 %**				
Total Composite Values of Fibrous Components: **Asbestos (Trace)**							
Cellulose (Trace)							
39	11062050						
Layer: Black Tile			**ND**				
Layer: Black Mastic		Chrysotile	**5 %**				
Total Composite Values of Fibrous Components: **Asbestos (Trace)**							
Cellulose (Trace)							
40	11062051						
Layer: Beige Tile		Chrysotile	**2 %**				
Layer: Black Mastic		Chrysotile	**5 %**				
Total Composite Values of Fibrous Components: **Asbestos (2%)**							
Cellulose (Trace)							
41	11062052						
Layer: Beige Tile		Chrysotile	**2 %**				
Layer: Black Mastic		Chrysotile	**5 %**				
Total Composite Values of Fibrous Components: **Asbestos (2%)**							
Cellulose (Trace)							
42	11062053						
Layer: Beige Tile		Chrysotile	**2 %**				
Layer: Black Mastic		Chrysotile	**5 %**				
Total Composite Values of Fibrous Components: **Asbestos (2%)**							
Cellulose (Trace)							
43	11062054						
Layer: Pink Tile			**ND**				
Layer: Black Mastic			**ND**				
Layer: White Non-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
Cellulose (Trace)							

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Report Number: B143188
Date Printed: 12/22/10

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
44	11062055						
Layer: Tan Tile			**ND**				
Layer: Brown Mastic			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
45	11062056						
Layer: Grey Mortar			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
46	11062057						
Layer: Grey Mortar			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
47	11062058						
Layer: Grey Mortar			**ND**				
Layer: Green Mortar			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
48	11062059						
Layer: Grey Mortar			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
49	11062060						
Layer: White Mastic			**ND**				
Total Composite Values of Fibrous Components: Cellulose (2 %)		**Asbestos (ND)**					
50	11062061						
Layer: White Mastic			**ND**				
Total Composite Values of Fibrous Components: Cellulose (2 %)		**Asbestos (ND)**					
51	11062062						
Layer: Brown Ceramic Tile			**ND**				
Layer: Grey Grout			**ND**				
Layer: Grey Mortar			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					
52	11062063						
Layer: Brown Ceramic Tile			**ND**				
Layer: Grey Grout			**ND**				
Layer: Grey Mortar			**ND**				
Total Composite Values of Fibrous Components: Cellulose (Trace)		**Asbestos (ND)**					

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Client Name: Protech Consulting & Engineers Inc.

Report Number: B143188
Date Printed: 12/22/10

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
53	11062064						
Layer: Grey Fibrous Material		Chrysotile	**80 %**				
Layer: Off-White Woven Material			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (76%)** Cellulose (10 %)							
54	11062065						
Layer: Grey Fibrous Material		Chrysotile	**80 %**				
Layer: Off-White Woven Material			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (76%)** Cellulose (10 %)							
55	11062066						
Layer: Grey Fibrous Material		Chrysotile	**80 %**				
Layer: Off-White Woven Material			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (76%)** Cellulose (10 %)							
56	11062067						
Layer: Grey Fibrous Material			**ND**				
Layer: Off-White Woven Material			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)** Cellulose (10 %) Fibrous Glass (80 %)							
57	11062068						
Layer: Grey Fibrous Material			**ND**				
Layer: Off-White Woven Material			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)** Cellulose (10 %) Fibrous Glass (80 %)							
58	11062069						
Layer: Grey Fibrous Material			**ND**				
Layer: Off-White Woven Material			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)** Cellulose (10 %) Fibrous Glass (80 %)							
59	11062070						
Layer: Tan Semi-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)** Cellulose (Trace) Fibrous Glass (70 %)							
60	11062071						
Layer: Yellow Fibrous Material			**ND**				
Layer: Foil			**ND**				
Layer: Tan Semi-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)** Cellulose (Trace) Fibrous Glass (90 %)							

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Client Name: Protech Consulting & Engineers Inc.

Report Number: B143188
Date Printed: 12/22/10

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
61	11062072						
Layer: Tan Semi-Fibrous Material			**ND**				
Layer: Foil			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (Trace) Fibrous Glass (60 %)							
62	11062073						
Layer: Grey Fibrous Material		Chrysotile	**80 %**				
Total Composite Values of Fibrous Components:		**Asbestos (80%)**					
Cellulose (15 %)							
63	11062074						
Layer: Tan Non-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (Trace)							
64	11062075						
Layer: Tan Non-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
Cellulose (Trace)							
65	11062076						
Layer: Black/Grey Felt		Chrysotile	**60 %**				
Total Composite Values of Fibrous Components:		**Asbestos (60%)**					
Cellulose (25 %) Fibrous Glass (10 %)							
66	11062077						
Layer: Black/Grey Felt		Chrysotile	**60 %**				
Total Composite Values of Fibrous Components:		**Asbestos (60%)**					
Cellulose (25 %) Fibrous Glass (10 %)							
67	11062078						
Layer: Black Felt		Chrysotile	**60 %**				
Total Composite Values of Fibrous Components:		**Asbestos (60%)**					
Cellulose (25 %) Fibrous Glass (10 %)							
68	11062079						
Layer: Black/Grey Felt		Chrysotile	**60 %**				
Total Composite Values of Fibrous Components:		**Asbestos (60%)**					
Cellulose (25 %) Fibrous Glass (10 %)							
69	11062080						
Layer: Black/Grey Felt		Chrysotile	**60 %**				
Total Composite Values of Fibrous Components:		**Asbestos (60%)**					
Cellulose (25 %) Fibrous Glass (10 %)							
70	11062081						
Layer: Black/Grey Felt		Chrysotile	**60 %**				
Total Composite Values of Fibrous Components:		**Asbestos (60%)**					
Cellulose (25 %) Fibrous Glass (10 %)							

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Report Number: B143188
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Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
71	11062082						
Layer: Black/Grey Felt		Chrysotile	**60 %**				
Total Composite Values of Fibrous Components: **Asbestos (60%)** Cellulose (25 %) Fibrous Glass (10 %)							
72	11062083						
Layer: Brown Mastic			**ND**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)** Cellulose (Trace)							
73	11062084						
Layer: Grey Mastic		Chrysotile	**2 %**				
Total Composite Values of Fibrous Components: **Asbestos (2%)** Cellulose (Trace)							
74	11062085						
Layer: Silver Mastic		Chrysotile	**2 %**				
Layer: Paint			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (2%)** Cellulose (Trace)							
75	11062086						
Layer: Grey Non-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)** Cellulose (Trace)							
76	11062087						
Layer: Grey Non-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)** Cellulose (Trace)							
77	11062088						
Layer: Grey Non-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)** Cellulose (Trace)							
78	11062089						
Layer: Grey Non-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)** Cellulose (Trace)							
79	11062090						
Layer: Grey Non-Fibrous Material			**ND**				
Total Composite Values of Fibrous Components: **Asbestos (ND)** Cellulose (Trace)							

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Report Number: B143188
Client Name: Protech Consulting & Engineers Inc. **Date Printed:** 12/22/10

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer

James Flores, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

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ProTech
Consulting & Engineering
1208 Main Street
Redwood City, CA 94063
Phone: (650) 569-4020 Fax: (650) 569-4023
Environmental Services

Job # 1024.MA10

P.O. # 122.1024.79

General Information

Date: 12.20.2010

Job ID: 1313 NEWELL, PALO ALTO

Collected By: RW

Lab: FAS1

Analysis Requested

- ☐ PCM NIOSH 7400
- ☐ TEM
  - ○ AHERA
  - ○ Level 2
  - ○ Bulk Quantitative
  - ○ Bulk Qualitative
- ☑ PLM BULK - EPA/600/R/116
- ☐ Lead
  - ○ AA
  - ○ TTLC
  - ○ STLC
  - ○ TCLP
- ☐ Mold
- ☐ Other

Turn Around Time

- ☐ Rush
- ☐ 12 hours
- ☐ 24 hours
- ☑ 48 hours
- ☐ 3-5 days
- ☐ _____

Special Instructions

☐ Prior Positive

Filter Type: ☐ MCE, 0.8 µm, 25mm ☐ MCE, 0.45µm, 25mm ☐ MCE, 0.8µm, 37mm ☐ Other

Sample # / Date	Sample Type	Sample Protocol	Location / Activity / Material Description	Time On/Off	LPM	Total Min. / Total Vol. / Fibers/Fields	Results
# 01 THRU 09 10 11	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	SHEETROCK, TAPE, COMPOUND SHEETROCK TAPE COMP W/ TEXTURE SURFACING TEXTURE	on ___ off ___ pump# ___	on ___ end ___ Ave ___ Roto# ___		
# 12 THRU 16 17/18	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	2X2 CEILING TILES 1X1 CEILING TILES W/ BROWN MASTIC	on ___ off ___ pump# ___	on ___ end ___ Ave ___ Roto# ___		
# 19/20 21/22	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	1X1 CEILING TILES W/ BROWN MASTIC 1X1 CEILING TILES - NO MASTIC	on ___ off ___ pump# ___	on ___ end ___ Ave ___ Roto# ___		
# 23 THRU 25 26/27	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	BROWN MASTIC BLACK MASTIC	on ___ off ___ pump# ___	on ___ end ___ Ave ___ Roto# ___		
# 28 29	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	TAN 12X12 VFT W/ BLACK MASTIC GRAY 9X9 VFT W/ BLACK MASTIC	on ___ off ___ pump# ___	on ___ end ___ Ave ___ Roto# ___		
# 30 THRU 32 33	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	TAN 12X12 VFT W/ BLACK MASTIC GRAY 9X9 VFT W/ BLACK MASTIC	on ___ off ___ pump# ___	on ___ end ___ Ave ___ Roto# ___		
# 34/35 36/37	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	YELLOW MASTIC BLACK MASTIC	on ___ off ___ pump# ___	on ___ end ___ Ave ___ Roto# ___		
# 38/39 40 THRU 42	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	BLACK 12X12 VFT W/ BLACK MASTIC BEIGE 12X12 VFT W/ BLACK MASTIC	on ___ off ___ pump# ___	on ___ end ___ Ave ___ Roto# ___		
# 43 44	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	PINK 12X12 VFT W/ BLACK MASTIC TAN 9X9 CORK TILE W/ BROWN MASTIC	on ___ off ___ pump# ___	on ___ end ___ Ave ___ Roto# ___		

CHAIN OF CUSTODY

Relinquished By:	Date/Time	Received By:	Date/Time
	12.20.2010	Dotty D 355	12/20/10

WHITE - RETAIN WITH SAMPLES CANARY - FILE COPY

ProTech
Consulting & Engineering
1208 Main Street
Redwood City, CA 94063
Phone: (650) 569-4020 Fax: (650) 569-4023
Environmental Services

Job # 1024.MA10

P.O. # 1220.1024.79

General Information

Date: 12.20.2010

Job ID: 1313 NEWELL, PALO ALTO

Collected By: RN

Lab: EMSL

Analysis Requested

- ☐ PCM NIOSH 7400
- ☐ TEM
  - ○ AHERA
  - ○ Level 2
  - ○ Bulk Quantitative
  - ○ Bulk Qualitative
- ☒ PLM BULK - EPA/600/R/116
- ☐ Lead
  - ○ AA
  - ○ TTLC
  - ○ STLC
  - ○ TCLP
- ☐ Mold
- ☐ Other

Turn Around Time

- ☐ Rush
- ☐ 12 hours
- ☐ 24 hours
- ☒ 48 hours
- ☐ 3-5 days
- ☐ _____

Special Instructions

☐ Prior Positive

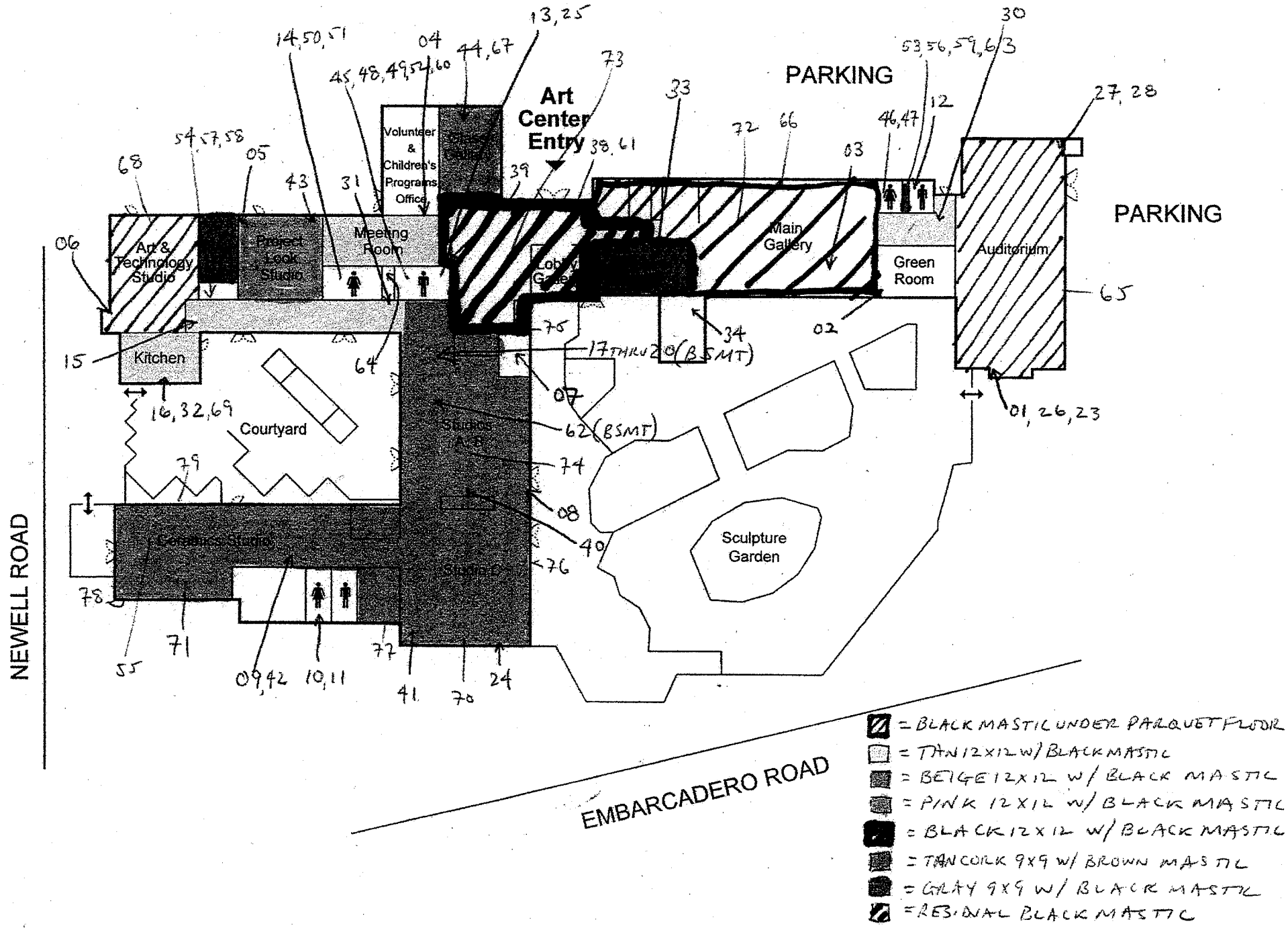
Filter Type: ☐ MCE, 0.8 µm, 25mm ☐ MCE, 0.45µm, 25mm ☐ MCE, 0.8µm, 37mm ☐ Other _____

Sample # / Date	Sample Type	Sample Protocol	Location / Activity / Material Description	Time On/Off	LPM	Total Min. / Total Vol. / Fibers/Fields	Results
# 45/46 / 47/48	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	C.T. MORTAR - FLOORS - WALLS	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
# 49/50 / 51/52	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	C.T. MASTIC - WALLS C.T. MORTAR - FLOORS	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
# 53 THRU 55 / 56 THRU 58	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	TSI W/ CANVAS JACKET TSI ELBOWS W/ CANVAS JACKET	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
# 59 THRU 61 / 62	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	HVAC DUCT SEAM TAPE PIPE HANGER INSULATION	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
# 63/64 / 65 THRU 71	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	INSULATION BRICKS ROOF FELT	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
# 72 THRU 74	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	SEAM MASTIC	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
# 75 THRU 79	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	EXT. WINDOW GLAZING	on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on _____ off _____ pump# ____	on _____ end _____ Ave _____ Roto# _____		

CHAIN OF CUSTODY

Relinquished By:	Date/Time	Received By:	Date/Time
	12.20.2010	Betty D 3:55PM	12/20/10

WHITE - RETAIN WITH SAMPLES CANARY - FILE COPY


NEWELL ROAD
EMBARCADERO ROAD
PARKING
PARKING
Art Center Entry
Volunteer & Children's Programs Office
Meeting Room
Project Look Studio
Art & Technology Studio
Kitchen
Courtyard
Ceramics Studio
Studios A-B
Studio C
Lobby Gallery
Main Gallery
Green Room
Auditorium
Sculpture Garden
14,50,51
04
44,67
13,25
45,48,49,54,60
73
33
53,56,59,63
30
27,28
12
46,47
72
66
03
68
54,57,58
05
43
31
39
38,61
06
15
64
75
17 THRU 20 (BSMT)
34
02
65
07
62 (BSMT)
74
08
40
76
16,32,69
79
78
71
55
09,42
10,11
77
41
70
24
01,26,23
= BLACK MASTIC UNDER PARQUET FLOOR
= TAN 12X12 W/ BLACK MASTIC
= BEIGE 12X12 W/ BLACK MASTIC
= PINK 12X12 W/ BLACK MASTIC
= BLACK 12X12 W/ BLACK MASTIC
= TAN CORK 9X9 W/ BROWN MASTIC
= GRAY 9X9 W/ BLACK MASTIC
= RESIDUAL BLACK MASTIC

10/24/10 DRAW

ProTech
Consulting & Engineering

1208 Main Street, Redwood City, CA 94063
(650) 569-4020 Fax (650) 569-4023

LEAD NOTICE
AND
INSTRUCTIONS TO BIDDERS

Peninsula Art Center
1313 Newell Street
Palo Alto, California

1. GENERAL

A. This section deals with general requirements and procedures in conjunction with the work related to lead containing material and lead-based paint to be performed by all Contractors.

2. DEFINITIONS

A. Lead: Metallic lead, all inorganic lead compounds and organic lead soaps, and excluding all other organic lead compounds.

B. Lead-containing: Any material, coating, substrate or product, which contains metallic lead, all inorganic, lead compounds and organic lead soaps, and excluding all other organic lead compounds.

3. KNOWN LEAD

A. Lead-containing materials (LCM) and lead-based paint (LBP) have been identified on this project. Lead was found in ceramic tile and railing components. Lead containing materials were found throughout see the XRF report. Lead testing reports and lead data are available for the benefit, review, and evaluation of each Contract whose employees will or may perform work on the Project.

B. Contractors/employers may need to obtain additional data to assess and prepare for regulatory compliance relative to their specific scope of work. In the absence of analytical data, surface coatings should be assumed to contain lead.

C. Contractors/employers will be required to perform various tasks that could potential personnel to regulated levels of lead. Tasks that may require the disturbance of lead include but not necessarily limited to:

- Renovation/demolition work

4. PUBLIC SAFETY AND PUBLIC CONVENIENCE

A. The Contractor(s) shall take all necessary measures to ensure the safety of the general public and adjacent residents throughout the course of this project. The Contractor shall take adequate measures to make the building or work areas inaccessible to the public (such as temporary fencing if necessary).

B. The Contractor shall ensure that lead (in any form) does not contaminate the site during this demolition process.

5. REGULATIONS

A. Contractors are required to follow all Federal, State, and local standards that regulate lead-related construction work and lead disposal including but not limited to: the U.S. Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), the California Department of Occupational Safety and Health (Cal-OSHA), and any other applicable federal, state and local government regulations pertaining to lead-based paints (LBP) and other lead-containing wastes.

B. The Contractor and all subcontractors shall ensure that each employee who will or may handle, impact, or otherwise disturb lead or encounter lead contaminated areas:
   1 Receive proper and sufficient Cal OSHA compliant training.
   2 Receive proper and sufficient personal protection equipment.

B. Lead-based paint and lead-containing paint materials and waste will be handled according with applicable laws and regulations in effect at the time of disturbance, transport, or disposal of said hazardous materials or waste and requirements of the Contract Documents. In the event of conflict, the more stringent requirement will apply. The Contractor is alerted to and will be familiarize itself to the following laws and regulations regarding the generation, management, characterization and disposal of hazardous waste:

C. Regulatory Statutes

1 Environmental Protection Agency National Ambient Air Quality
2 Standards, as applicable (40 CFR 61)
3 Occupational Safety and Health Administration (inclusive of OSHA 29 CFR 1919.134 and 1926.62)
4 California Department of Occupational Safety and Health (inclusive of Cal/OSHA 8 CCR 1532.1, 3203, 5155, 5194, 5216)
5 California Environmental Protection Agency (Cal-EPA), (22 CCR Section 66000, et seq.)
6 California Department of Health Services (17 CCR Sections 3500061000)
7 Resources Conservation and Recovery Act (42 U.S.C. Section 6901 et seq., and regulations 40CFR part 260 et seq.)
8 California Health and Safety Code (Division 20 and regulations, and 22 CCR section 66000 et seq.).
9 Resource Conservation and Recovery Act
10 Federal Occupational Safety and Health Administration (Fed/OSHA) (29CFR 1910.134 and 1926.62)
11 Federal Environmental Protection Agency (Fed/EPA) (40 CFR50 et seq.) Federal Department of Transportation (49 CFR)
12 Other applicable federal, state, and local governmental regulations pertaining to lead hazards and lead waste.

6. REGULATORY COMPLIANCE

A. Cal OSHA - Currently there is no lead "abatement" (as defined by the California Department of Health Services) anticipated or required for this project. All Contractors/employers whose employees may impact or perform trigger activity associated with lead-based paint or lead containing materials shall comply with the requirements, standards and work practices codified by Cal OSHA lead construction standard per CCR Title 8 § 1532.1. Each Contractor/employer shall:

1. Make an assessment as to the applicability of the Cal OSHA lead construction standard relative their specific work. Cal OSHA standards are designed to regulate and enforce on-the-job worker safety. Employers are required by law to ensure that employees are not exposed to airborne lead levels that exceed the permissible exposure limit (PEL).

The standard requires worker exposure monitoring, medical surveillance, training, special work practices, etc.

2. Contractors/employers whose employees will be working on this project are required to assess lead exposure risk to their employees (as per Cal OSHA lead standard CCR Title 8 § 1532.1). In making this evaluation, contractors should:

   a. Review all lead related documents and reports.

   b. Become familiar and comply with Cal OSHA and other applicable lead regulations.

   c. Make an assessment to determine potential worker exposure relative to the various lead-related construction work to be performed.

   d. Collect supplemental data/samples if necessary.

   e. Assess and monitor worker lead exposure levels during the performance of lead trigger tasks or other activities that may potentially expose workers to levels above the Cal OSHA permissible exposure level.

   f. Determine compliance requirement relative to DOSH notification rules.

3. Cal OSHA requires compliance with their lead construction regulation when:

   a. The permissible exposure limit (PEL) will or may be exceeded. The PEL is an exposure to airborne lead dust of 50 micrograms of lead per cubic meter of air (50 $\mu g/m^3$) over an 8 hour time weighted average (TWA).

   b. Employees perform "trigger activities" that impact a material containing lead in any detectable amount. Cal OSHA mandates that an employer assume the PEL will be exceeded when his/her employees conduct "trigger activities" involving lead. Trigger activities are defined as follows:

Trigger Activity	Anticipated Exposure	Required Respirator
• Manual demolition • Manual scraping and sanding • Heat gun use • Use of power tools with dust collection systems • Spray painting with lead paint • Any other activity that the employer has any reason to believe that an employee may be exposed in excess of the PEL.	50-100 $\mu m/m^3$	Half-mask, air purifying
• Using lead containing mortar • Lead burning • Rivet busting • Power tool cleaning without dust collection system • Clean-up of dry abrasive blast residue.	500-2500 $\mu m/m^3$	Full-face, air purifying, or Tight fitting PAPR, or Supplied air, contiguous flow
• Abrasive blasting • Welding • Cutting • Torch burning.	>2500 $\mu m/m^3$	Supplied air, pressure demand

4. If Cal OSHA lead compliance is required, contractor(s) shall adhere to the following requirements:

   a. Construct Project Hygiene Facilities and implement decontamination policies in accordance with the Cal OSHA lead construction standard. Worker decontamination station shall be provided at all locations where worker enter or exit the work area. The decon station shall be placed at the most strategic location to allow easy worker access. The Contractor must install a filtering system for removing contaminants from the drained water. The system must have as a two stage cascading filtering system capable of filtering down to 5 µm or smaller. Filtered water may then be disposed of into the sanitary sewer. The Contractor shall maintain a supply of filters for the filtering system. The filters will be changed as often as needed to prevent the system from clogging.

   b. Determine if any employee may be exposed to lead at or above the action level (30 mg/m^3). This assessment is made by taking at least one full shift personal air sample for each job classification.

   c. Until an exposure assessment is made, any employee performing a trigger activity, shall be treated as if exposed above the personal exposure limit (PEL, 50 mg/m^3).

   d. Until an exposure assessment is performed, the employer must implement employee protective measures per Cal OSHA - CCR Title 8 § 1532.1 including:

      - Appropriate respiratory protection
      - Appropriate personal protective clothing and equipment
      - Appropriate change areas
      - Appropriate hand wash facilities
      - Biological monitoring (blood testing)
      - Appropriate training

   e. Implement engineering controls and work practice controls, including administrative controls, to reduce and maintain employee exposure to lead at or below the PEL or to the lowest feasible level. If engineering controls can not reduce exposures below the PEL, supplement controls with appropriate respiratory protection.

   f. Prior to the job, establish and implement a written compliance program to ensure that no employee is exposed to lead above the PEL. The program must address the specific issues outlined in Cal OSHA - CCR Title 8 § 1532.1.

   g. Respirator use is required when:

      - Employee exposure exceeds the PEL
      - Employee requests it
      - During the initial exposure assessment

   h. If required, implement a respiratory protection program addressing the specific elements outlined in the OSHA respiratory protection standard (CCR Subchapter 7. General Industry Safety Orders § 5144).

   i. If required, implement a medical surveillance program for employees exposed on any day to lead at or above the action level. The medical surveillance program must address the specific elements in the standard including (but not limited to):

      - Initial medical surveillance consisting of biological monitoring (blood testing) and analysis for lead and zinc protoporphyrin levels.
      - Employee notification of blood test results.

- Medical examinations and consultation under certain circumstances.

j. Post appropriate warning signs (as prescribed in the standard) in each regulated area or work area where an employee's exposure to lead is above the PEL.

k. The employer must establish and maintain an accurate record of:

- Exposure assessment data
- Medical surveillance data
- Observation procedures

l. Contractors/Employers whose employees disturbs more that 100 sq ft of lead-based paint (LBP) are required to submit written notification to Cal OHSA (per Health and Safety Code, Title 17 CCR Section 36000 (c)). The Cal OSHA LBP notification rule under requires 24 hour advance notice prior to LBP disturbance.

7. SITE PROTECTIVE CONTROLS

A. Where containment is required to prevent migration of lead paint contaminants to another property, containment barriers shall be at least as effective at protecting human health and the environment as those contained in the HUD Guidelines or the Lead Paint Removal Guide published by the Steel Structure Painting Council, whichever is applicable.

B. Perform all lead-related construction work in accordance with Cal OSHA lead construction standards and all other applicable regulatory requirements.

C. General Dust Controls: Implement engineering controls as necessary to reduce airborne exposures to lead to the greatest extent possible. Engineering controls shall include but not necessarily be limited to:

1. Misting of the work area as necessary to eliminate visible emissions beyond the regulated area during active demolition.

2. Collect all lead debris and lead contaminated waste for proper waste profiling, packaging, labeling, and disposal.

3. Power tools used for lead-paint removal (if performed) shall be equipped with attached HEPA vacuums to collect lead dust emissions generated by the power tool(s).

4. Install worker decontamination facilities immediately adjacent to the work area entry/exit.

5. If any of the containment systems are damaged in any way, repairs will be made immediately.

D. Warnings and Signs: Provide the following minimum signs and posting requirements:

1. The Contractor will establish a regulated area where airborne concentrations of lead may exceed the PEL. Only authorized personnel may enter the regulated area. All persons entering the regulated area will be supplied with and required to wear appropriate personal protective equipment and respiratory protection.

2. Warning signs and caution tape will be posted at all approaches to the regulated area. Warning signs shall be visible from all vantage points approaching the work area so that untrained personnel and/or the public can take precautionary measure to avoid the restricted area. No unauthorized person will be allowed to be within 30 feet of active lead-related construction work. Lead warning signs will read as follows:

WARNING
LEAD WORK AREA

POISON
NO SMOKING OR EATING
AUTHORIZED PERSONNEL ONLY

E. Lockout/tag-out electrical equipment within the regulated area, as necessary.

8. WASTE DISPOSAL AND MANIFESTING PROCEOURES

A. All lead and lead-contaminated debris shall be collected and kept separate from all/any non-lead waste. Laboratory costs associated with analyses required for disposal, will be at the Contractor's expense. Lead-waste streams shall be tested to characterize hazard levels as follows:

Test 1 - California : SW846, Total Threshold Limit Concentration (TTLC)

If: TTLC is less than 50 mg/kg STOP testing - classify as non-hazardous waste.

If: TTLC is greater than 50 mg/kg but less than 1000 mg/kg perform test 2 to determine Cal-Haz status.

Test 2 - California : Waste Extraction Test (WET), Soluble Threshold Limit Concentration (STLC)

If: STLC is less than 5 mg/l - classify as a Non Hazardous Waste.

If: STLC is greater than 5 mg/l AND TTLC is greater than 100 – perform test 3 to determine RCRA requirements - classify as a California Hazardous Waste or RCRA Waste (pending TCLP)

Test 3 - Federal : Soluble Threshold Limit Concentration (TCLP)

If: TCLP is less than 5 mg/l - classify as non-RECRA waste.

If: TCLP is greater than 5 mg/l - classify as RECRA waste, stabilize waste.

B. The contractor will be responsible for the proper storage, packaging, labeling, manifesting, transportation, and disposal of lead containing and lead hazardous materials.

C. Packing, labeling, transporting, and disposing of hazardous waste shall comply with Cal-EPA regulations under 22 CCR, including completion of the Uniform Hazardous Waste Manifest Form (OTSC 8022A and EPA 8700-22).

D. Segregate, containerize, and characterize construction debris including rags, protective coveralls, polyethylene sheeting, and other consumable items. Waste will be packaged in accordance with the applicable U.S. Department of Transportation regulations included in 49 CFR Parts 173, 178, and 179.

E. A "Waste Manifest" will be completed for disposal of hazardous waste. The transporter will possess a valid EPA Transporter ID number. If 500 pounds or more of hazardous waste will be disposed in a California disposal site. Provide this number to the City so that the City may obtain a State Generator 1.0. Number from the Board of Equalization. The Contractor's Hazardous Materials Supervisor will notify the Owner's Inspector at least 48 hours before the time that the Manifest is required to be signed by the Owner.

F. Warning labels will be affixed to all waste containers that contain lead wastes in concentrations considered hazardous. The labels will conform to RCRA, DOT, and DTSC guidelines.

G. Any lead contaminated water generated during the work for decontamination purposes will be filtered to 5 µm and drummed. If TTLC/STLC testing can prove that the water is non-hazardous, it will be discharged into the sanitary sewer system. If the water is shown as hazardous per TTLC/STLC testing, it will be disposed as such.

ProTech
Consulting & Engineering

1208 Main Street, Redwood City, CA 94063
(650) 569-4020 Fax (650) 569-4023

Date: January 5, 2011
Report #: 1024-MA10
DHS Certified Inspector: **Chris Elliott**
DHS Certified Lead Inspector # 18373

LEAD SURVEY AND EVALUATION

PROJECT:

Peninsula Art Center
1313 Newell
Palo Alto, California

PREPARED FOR:

Mr. Hung Nguyen
City of Palo Alto
Palo Alto, California

PREPARED BY:

PROTECH CONSULTING AND ENGINEERING

INTRODUCTION

December 17, 2010, **ProTech Consulting and Engineering** performed a cursory survey to detect the presence of lead-based paint (LBP) the Peninsula Art Center located at 1313 Newell, Palo Alto, California. Lead survey work was performed for the purpose of identifying the presence of lead-based (LBP) paint on major building components throughout the site. ProTech's lead survey services were conducted at the request of the City of Palo Alto, California.

The following report presents the results of ProTech's lead building survey. Lead-related consulting services were conducted by Chris Elliott. The objective of ProTech's lead survey was limited to providing the following scope services:

- Conduct a survey of the subject sites to identify suspect LBP on major building components.
- Take random reading of painted surfaces by X-ray fluorescence (XRF) detector to determine the presence of lead-based paint on major building components.
- Make general recommendations as appropriate.

This screening survey was conducted for the purpose of generally characterizing the presence of lead-based paint on major building components. ProTech does not represent this screening survey as a comprehensive survey or evaluation. This survey and the sampling methodology used during this scope of work did not comply with comprehensive HUD lead survey methods of protocol.

RESULTS

Lead was detected in various amounts on a variety of building components. Sample results fell into one of three categories a follows:

1	Lead-based paint (LBP)	1 milligrams of lead per square centimeter (mg/cm^2) or greater
2	Lead-containing paint (LCP)	<1 mg/cm^2 of lead
3	No detected lead (ND	0 or <0 mg/cm^2 of lead

There were ninety-eight (98) XRF reading taken throughout that site including 6 calibration readings. The results of these reading are summarized as follows:

LBP:	Five (5) readings tested positive for lead-based paint (LBP). LBP was detected on a limited number of surfaces in various areas of the site.

LCP:	Twenty-four (24) readings tested positive for lead-containing paint
ND:	No lead was detected in sixty-three (63) readings

Interpretation of XRF Readings:

- Lead-based paint (LBP) is defined as paint (or other coating) that contains 1 mg/cm^2 of lead or greater.

- Test results below 1 mg/cm^2 but above 0 1 mg/cm^2 are considered to contain detectable amounts of lead. These results are reported with a 95% confidence limit as calculated by the XRF paint analyzer.

- Lead may be present in paint/coatings reported as Zero (0) or less than 0. Zero (0) or "non-detected" XRF results cannot be used to determine that no lead is present for Cal OSHA worker protection purposes. Cal OSHA regulates lead at very low levels when employees engage in certain tasks involving lead. A more sensitive analytical method must be used to show that no lead is present for Cal OSHA compliance. Employers, whose employees plan to disturb painted surfaces at this site should assume that some lead is present unless proven otherwise via paint chip sampling and laboratory analysis.

An inventory of all sample results can be found in the attached "Lead Survey Report". Paint sampling was not comprehensive or representative of all painted surfaces.

PAINT CHIP SAMPLE RESULTS

Because no lead-based paint (LBP) was detected during XRF testing, representative paint-chip samples were colleted and submitted to a certified laboratory for analysis. Cal OSHA requires laboratory analysis to prove if lead is present at levels below the XRF quantification limit. The reason Cal OSHA requires paint-chip analysis is because they regulate materials that contain lead in any amount.

During the survey, three (5) paint chip samples were submitted for laboratory analysis by atomic absorption (AA) spectroscopy. Detectable amounts of lead were reported in three of three (3 of 3) samples. Cal OSHA lead construction standards must be implemented and followed if employees perform trigger tasks on surfacing containing detectable amounts of lead.

Sample results were reported as follows:

Sample Description & Location	Sample No	Results PPM	LBP	LCP	Lead Free
White paint on drywall	01	<0.006	No	No	Yes
White pain on wood interior window	02	0.26	No	Yes	No
White paint on wall covering	03	0.022	No	Yes	No

Gray paint on wood	04	<0.008	No	No	Yes
Brown paint exterior wood	05	0.13	No	Yes	No
Tan paint on exterior wood	06	<0.006	No	No	Yes

Weight % = Total lead content in weight percent
PPM = Parts per million

CONCLUSION AND RECOMMENDATION

- ProTech recommends that lead hazards be remediated by a qualified lead abatement contractor. All lead abatement work should be performed by DHS certified personnel employing lead work practices in accordance with HUD guidelines.

- Any work performed at the subject site where LBP or LCP is likely to be disturbed should be performed by a contractor trained and qualified to perform lead-related construction work. Any work performed to remediate a lead hazard should be performed by DHS certified personnel employing lead work practices in accordance with HUD guidelines.

- ProTech recommends that contractors employ HUD developed, lead safe work practices if lead coated surfaces are to be impacted or disturbed. In general, "lead safe work practices" would include methods for controlling lead dust; properly controlling, collecting and disposing of lead waste; worker training, monitoring, and protection; and environmental monitoring.

- Contractors whose employees disturbs more that 100 sq ft of lead-based paint (LBP) are required to submit written notification to Cal OHSA (per Health and Safety Code, Title 17 CCR Section 36000 (c)). The Cal OSHA LBP notification rule under requires 24-hour advance notice prior to LBP disturbance.

- Contractors, whose employees work at this site, are required to assess if their work will be subject to the requirements of the Cal OSHA lead construction standard (CCR Title 8 § 1532). Cal OSHA standards are designed to regulate and enforce on-the-job worker safety. Employers are required by law to ensure that employees are not exposed to airborne lead levels which exceed the permissible exposure limit (PEL). The standard requires worker exposure monitoring, medical surveillance, training, special work practices, etc.

  Cal OSHA requires compliance with their lead construction regulation when:

  1. The permissible exposure limit (PEL) will or may be exceeded. The PEL is an exposure to airborne lead dust of 50 micrograms of lead per cubic meter of air (50 $\mu g/m^3$) over an 8-hour time weighted average (TWA).

  2. Employees perform "trigger activities" that impact a material containing lead in any detectable amount. Cal OSHA mandates that an employer assume the

PEL will be exceeded when his/her employees conduct "trigger activities" involving lead. Trigger activities are defined as follows:

Trigger Activity	Anticipated Exposure	Required Respirator
• Manual demolition • Manual scraping and sanding • Heat gun use • Use of power tools with dust collection systems • Spray painting with lead paint • Any other activity that the employer has any reason to believe that an employee may be exposed in excess of the PEL.	50-100 $\mu m/m^3$	Half-mask, air purifying
• Using lead containing mortar • Lead burning • Rivet busting • Power tool cleaning without dust collection system • Clean up of dry abrasive blast residue.	500-2500 $\mu m/m^3$	Full-face, air purifying, or Tight fitting PAPR, or Supplied air, contiguous flow
• Abrasive blasting • Welding • Cutting • Torch burning.	>2500 $\mu m/m^3$	Supplied air, pressure demand

- Contractors whose employees will be working on this project are required to assess lead exposure risk to their employees (as per Cal OSHA lead standard CCR Title 8 § 1532.1). In making this evaluation, contractors should:

  1. Review all lead related documents and reports.

  2. Become familiar and comply with Cal OSHA and other applicable lead regulations.

  3. Make an assessment to determine potential worker exposure relative to the various lead-related construction work to be performed.

  4. Collect supplemental data/samples if necessary.

  5. Assess and monitor worker lead exposure levels during the performance of lead trigger tasks or other activities that may potentially expose workers to levels above the Cal OSHA permissible exposure level.

  6. Determine compliance requirement relative to DOSH notification rules.

- Painted surfaces that contain levels of lead below 1 mg/cm^2, may create lead lead-contamination if paint is turned into dust by abrasion, scraping, or sanding. This report should be kept by the owner and all future owners for the life of the building.

- ProTech recommends that the building owner establish baseline soil and dust lead levels at the subject site. Contractors performing work at the site should then be required to leave the site "clean" relative to pre-existing conditions as established by baseline sampling.

- ProTech recommends that the building owner disseminate this report as well as any other lead-related information to all prospective contractors bidding work at the subject site. Contractor should be encouraged to evaluate and possibly supplement this data to assess potential worker exposure impact and possible regulatory requirements associated with their particular construction scope of work.

LEAD STANDARDS

The following is a discussion of the lead paint, dust, and soil standards established by the California Department of Health Services (DHS), California Occupational Safety and Health Administration (Cal OSHA), Environmental Protection Agency (EPA), and U.S. Department of Housing and Urban Development (HUD). These standards were used to compare with the sample results obtained during the risk assessment of the subject property.

Lead-Based Paint and Lead-Containing Materials:
The DHS, EPA, and HUD define "lead-based paint" (LBP) as any surface coating which contains a lead content of 5,000 parts per million (ppm) (or 0.5% by weight) or greater. Accordingly, surface coatings containing a lead content below these levels are not considered LBP and are not considered a hazard as defined by DHS, EPA, and HUD. LBP can present a lead hazard if the paint is damaged or deteriorated.

Cal OSHA defines lead-based paint at the Consumer Product Safety Commission's (CPAC) level of 600 ppm for non-trigger tasks (trigger tasks are discussed in the Lead-based Paint Regulation section of this report). However, when trigger tasks are conducted, the Cal OSHA regulation must be followed when there is **any detectable lead** in the product being disturbed.

Government Agency	Lead-based Paint Definition	Lead-containing Material Definition
OSHA and Cal OSHA	600 ppm or greater	Any detectable amount
DHS	1 mg/cm² or 5,000 ppm (or greater)	N/A
EPA	1 mg/cm² or 5,000 ppm (or greater)	N/A
HUD	1 mg/cm² or 5,000 ppm (or greater)	N/A

Lead In Dust:
The DHS, EPA, and HUD have each established lead in dust standards to define the presence of a lead hazard. According to these agencies, a lead hazard is determined to be present when lead wipe sample results are at or above the following hazard levels.

Sample Location	Hazard Level
Hard floors	40 μm/sq ft (50)
Interior window sills & horizontal surfaces	250 μm/sq ft
Exterior floors & horizontal window surfaces	400 μm/sq ft

Lead In Soil:
The DHS, EPA, and HUD have each established lead in bare soil standards to define the presence of a lead hazard. According to these agencies, a lead hazard is determined to be present when bare soil sample results are at or above the following hazard levels.

Sample Location	DHS Hazard Level
Bare soil (dwelling perimeter and yard)	1,000 PPM
Bare soil (children's play areas)	400 PPM

LEAD-BASED PAINT REGULATIONS

California Department of Health Services (DHS) - Title 17, CCR, Division 1, Chapter 8, Sections 35000-361000:
The DHS has implemented a comprehensive regulation that provides an accreditation process for lead training providers and professionals. This regulation requires anyone conducting lead paint surveys, risk assessments, lead paint abatement and lead hazard reduction work in any public or residential building to be DHS trained and certified.

A written abatement plan describing exposure prevention procedures, abatement methods, items to be abated, re-survey recommendations, and instructions on how to maintain potential lead hazards in a safe condition is required for all abatement work. DHS also requires notification of upcoming abatement work on Form 8551. This form must be posted at all job site entrances five days before abatement begins.

The standard requires inclusion of certain elements in each hazard evaluation report including a copy of DHS Form 8552. In addition, the standard requires the use of HUD guidelines when performing lead risk assessments, surveys, monitoring, abatement and interim control work.

Environmental Protection Agency (EPA) - Title X:
Under the Housing and Community Development Act of 1992 (Title X) Congress required the EPA to take on many responsibilities. A few of the key issues are discussed below.

On August 28, 1996, the EPA issued a model lead training and accreditation regulation. States were given two years to develop their own programs or adopt the EPA program. In California, the Department of Health Services (DHS) has developed a state training and accreditation program which is currently in effect.

In March 1996, the EPA issued the Real Estate Notification and Disclosure Rule. This rule requires owners of all private housing built before 1978 to take four actions, as follows:

1. Disclose any known hazards to potential buyers or renters.
2. Give potential buyers or renters the EPA/HUD lead disclosure pamphlet titled "Protect Your Family from Lead In Your Home."
3. Allow potential buyers ten days to conduct an optional survey or risk assessment.
4. Add language to real-estate contracts that confirms compliance with the activities described above.

The EPA's objective is to control renovation and remodeling work done in homes that might create lead dust hazards. In May 1998, they issued a regulation that will take effect in June 1999 requiring contractors working in pre-1978 homes to notify the owner if they will disturb more that two square feet of lead-paint.

Department of Housing and Urban Development (HUD):
HUD was the first agency to develop lead standards. By the end of the 1980's, HUD was developing numerous regulations and guidance documents to be used on HUD funded properties. In 1989, HUD published the most comprehensive lead guidance document for survey and management of lead paint hazards to date. A new guidance document ("Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing") for risk assessments, surveys, interim controls, and abatement of lead-based paint hazards replaced the old standard in August 1995. Chapter 7 of the 1995 guideline was revised in October 1997.

The new HUD Standard remains the most comprehensive lead risk assessment, survey, management, and abatement guidance document. Many other federal, state, and local regulations mandate compliance with HUD Guidelines.

California Occupational Safety and Health Administration - CCR Title 8 § 1532:
Cal OSHA regulations are designed to regulate and enforce on-the-job worker safety. Employers are required by law to ensure that employees are <u>not</u> exposed to airborne lead levels which exceed the permissible exposure limit (PEL) of 50 micrograms of lead per cubic meter of air (50 $\mu g/m^3$) over an 8 hour time weighted average (TWA). Both California and Federal OSHA standards requires worker training, air monitoring to determine work exposure to lead, initial blood testing, personal protective equipment, and specific work practices and engineering controls whenever employees disturb lead in **any concentration** (including less than 600 ppm) where the disturbance will result in exposures to airborne lead in concentrations over the OSHA Action Limit or PEL.

OSHA mandates that an employer **assume** the PEL will be exceeded when conducting "trigger activities". The Cal OSHA standard also requires DHS lead training and certification for any supervisors or workers who are shown to be exposed to airborne lead levels above the PEL.

Thank you for this opportunity to be of service, please contact me if you require additional information.

Respectfully Submitted,

Emanuel Dounias
DHS Certified Lead Inspector 13059

Glen Koutz
DHS Certified Lead Inspector I2204

Forensic Analytical Laboratories

Metals Analysis of Paints

Protech Consulting & Engineers Inc.
Project Manager

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: M115698
Date Received: 12/22/10
Date Analyzed: 12/23/10
Date Printed: 12/23/10
First Reported: 12/23/10

Job ID / Site: 1024MA10/PO# 1217-1024-06 - Penninsula Art Center, 1313 Newell, Palo Alto, CA
FALI Job ID: 1454

Date(s) Collected: 12/17/10

Total Samples Submitted: 6
Total Samples Analyzed: 6

Sample Number	Lab Number	Analyte	Result	Result Units	Reporting Limit*	Method Reference
01	30390473	Pb	< 0.006	wt%	0.006	EPA 3050B/7420
02	30390474	Pb	0.26	wt%	0.009	EPA 3050B/7420
03	30390475	Pb	0.022	wt%	0.006	EPA 3050B/7420
04	30390476	Pb	< 0.008	wt%	0.008	EPA 3050B/7420
05	30390477	Pb	0.13	wt%	0.006	EPA 3050B/7420
06	30390478	Pb	< 0.006	wt%	0.006	EPA 3050B/7420

* The Reporting Limit represents the lowest amount of analyte that the laboratory can confidently detect in the sample, and is not a regulatory level. The Units for the Reporting Limit are the same as the Units for the Final Results.

Dave Sandusky, CIH, Laboratory Supervisor, Hayward Laboratory

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

ProTech Consulting & Engineering
1208 Main Street
Redwood City, CA 94063
Phone: (650) 569-4020 Fax: (650) 569-4023
Environmental Services

Page ______ of ______
Job #: 1024MAIC
P.O. #: 1217-1024-06

General Information

Date: 12-17-10
Job ID: Peninsula Art center
1313 Newell
Palo Alto, CA
Collected By: CE
Lab: FASI

Analysis Requested

- ☐ PCM NIOSH 7400
- ☐ TEM
  - ○ AHERA
  - ○ Level 2
  - ○ Bulk Quantitative
  - ○ Bulk Qualitative
- ☐ PLM BULK - EPA/600/R/116
- ☒ Lead
  - ⊗ AA
  - ○ TTLC
  - ○ STLC
  - ○ TCLP
- ☐ Mold
- ☐ Other ______

Turn Around Time

- ☐ Rush
- ☐ 12 hours
- ☒ 24 hours
- ☐ 48 hours
- ☐ 3-5 days
- ☐ ______

Special Instructions

☐ Prior Positive

Filter Type: ☐ MCE, 0.8 μm, 25mm ☐ MCE, 0.45μm, 25mm ☐ MCE, 0.8μm, 37mm ☐ Other ______

Sample # / Date	Sample Type	Sample Protocol	Location / Activity / Material Description	Time On/Off	LPM	Total Min. / Total Vol. / Fibers/Fields	Results
# 01	☒ Bulk	☐ Amb. ☐ ALS ☐ Agg.	Wt paint on drywall	on / off / pump#	on / end / Ave / Roto#		
# 02	☒ Bulk	☐ Amb. ☐ ALS ☐ Agg.	Wt paint on wood interior window	on / off / pump#	on / end / Ave / Roto#		
# 03	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	Wt paint on wall exterior	on / off / pump#	on / end / Ave / Roto#		
# 04	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	Gray paint on wood	on / off / pump#	on / end / Ave / Roto#		
# 05	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	Bondo Exterior Wood	on / off / pump#	on / end / Ave / Roto#		
# 06	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	Tan Paint on Exterior Wood	on / off / pump#	on / end / Ave / Roto#		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on / off / pump#	on / end / Ave / Roto#		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on / off / pump#	on / end / Ave / Roto#		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on / off / pump#	on / end / Ave / Roto#		

CHAIN OF CUSTODY

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	12-17-10	Betty D 800	12/22/10

WHITE - RETAIN WITH SAMPLES *CANARY - FILE COPY*

LEGEND

HOW TO READ THE REPORT

Wall A, is the front wall of the building.
Walls B, C and D go clockwise around the building or room

REPORTS

Summery-- Gives only those readings at or above the action level of 1.0mg/cm2.

Detailed Report—Gives all reading by room and component.
Readings are not in numerical order. This report also gives comments

PAINT CONDITION

I=Intact

F=Fair

P=Poor

Comments

There were 98 readings taken, including calibrations, using the RMD XRF instrument. 5 of the readings registered at or above the action level of 1.0mg/cm2. A contractor practicing Lead Safe Practices should do any repairs or repainting of the actionable areas.

" A copy of this summary report must be provided to new lessees and purchasers of this property under Federal Law (24 CFR part 35 and 40 CFR part 745) before they become obligated under lease or sales contract. The complete report must also be provided to new purchasers and it must be made available to new tenants. Landlords and sellers are also required to distribute an educational pamphlet and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from lead-based paint hazards."

Chris Elliott DPH 18373

Date

LEAD PAINT INSPECTION REPORT

REPORT NUMBER: S#01369 - 12/17/10 15:10

INSPECTION FOR: City of Palo Alto
PO Box 10250
Palo Alto, CA 94303

PERFORMED AT: Peninsula Art Center
1313 Newell Road
Palo Alto, California

INSPECTION DATE: 12/17/10

INSTRUMENT TYPE: R M D
MODEL LPA-1
XRF TYPE ANALYZER
Serial Number: 01369

ACTION LEVEL: 1.0 mg/cm**2

OPERATOR LICENSE: California General

STATEMENT: Lead paint survey as agreed.
No representations are made for any areas not tested.

SIGNED _____ DATE _____

ProTech Consulting & Engineering
1208 Main Street
Redwood City, Ca. 94063
Phone: 650-569-4020
Fax: 650-569-4023

SEQUENTIAL REPORT OF LEAD PAINT INSPECTION FOR: City of Palo Alto

Inspection Date: 12/17/10
Report Date: 1/1/2011
Abatement Level: 1.0
Report No. S#01369 - 12/17/10 15:10
Total Readings: 98
Job Started: 12/17/10 15:10
Job Finished: 12/17/10 17:44

Peninsula Art Center
1313 Newell Road
Palo Alto, California

Read No.	Rm	Room Name	Wall	Structure	Location	Member	Paint Cond	Substrate	Paint Color	Lead (mg/cm≤)	Mode
1		CALIBRATION								0.8	TC
2		CALIBRATION								0.8	TC
3		CALIBRATION								0.8	TC
4	001	Meet Rm	C	Wall	L	Rgt	I	Drywall	White	-0.2	QM
5	001	Meet Rm	A	Wall	L	Ctr	I	Drywall	White	-0.4	QM
6	001	Meet Rm	B	Window		Lft Sill	I	Wood	White	0.1	QM
7	001	Meet Rm	C	Door		Rgt Rgt casing	I	Wood	White	0.3	QM
8	001	Meet Rm	C	Door		Rgt U Ctr	I	Wood	White	-0.2	QM
9	001	Meet Rm	D	Ceiling			I	Drywall	White	-0.1	QM
10	002	PL Studio	A	Wall	L	Ctr	I	Drywall	White	-0.2	QM
11	002	PL Studio	B	Wall	L	Ctr	I	Drywall	White	-0.4	QM
12	002	PL Studio	D	Ceiling			I	Drywall	White	0.2	QM
13	002	PL Studio	B	Door		Lft Rgt casing	I	Wood	White	0.0	QM
14	002	PL Studio	B	Door		Lft U Ctr	I	Metal	White	-0.1	QM
15	002	PL Studio	D	Door		Ctr Rgt casing	I	Wood	White	0.1	QM
16	002	PL Studio	D	Door		Ctr U Ctr	I	Wood	White	-0.1	QM
17	003	A &T Studio	C	Door		Lft U Ctr	I	Wood	White	-0.2	QM
18	003	A &T Studio	C	Door		Lft Rgt casing	I	Wood	White	0.4	QM
19	003	A &T Studio	B	Window		Ctr Sill	I	Wood	White	0.1	QM
20	003	A &T Studio	B	Door		Lft U Lft	I	Wood	White	0.3	QM
21	003	A &T Studio	A	Wall	L	Ctr	I	Drywall	White	-0.2	QM
22	003	A &T Studio	C	Wall	L	Ctr	I	Drywall	Green	-0.1	QM
23	003	A &T Studio	D	Ceiling			I	Wood	White	-0.2	QM
24	004	Kitchen	D	Window		Ctr Sill	I	Wood	Green	0.1	QM
25	004	Kitchen	D	Door		Ctr Header	I	Wood	Green	0.2	QM
26	004	Kitchen	D	Wall	U	Ctr	I	Wood	White	-0.1	QM
27	005	Ceramics	D	Door		Ctr Rgt casing	I	Metal	Red	1.0	QM
28	005	Ceramics	D	Door		Ctr U Ctr	I	Wood	Red	-0.3	QM
29	005	Ceramics	D	Window		Rgt Sill	I	Wood	Red	0.0	QM
30	005	Ceramics	B	Window		Ctr Sill	I	Wood	Red	0.1	QM
31	005	Ceramics	B	Door		Ctr Rgt jamb	I	Wood	White	0.4	QM
32	005	Ceramics	B	Door		Ctr L Ctr	I	Wood	White	0.0	QM
33	005	Ceramics	D	Wall	L	Lft	I	Drywall	White	-0.2	QM
34	006	CMens RR CS	A	Wall	L	Ctr	I	Ceramic	Green	-0.3	QM
35	006	CMens RR CS	C	Wall	L	Ctr	I	Ceramic	Green	-0.1	QM
36	006	CMens RR CS	C	Stall Door		Ctr	I	Metal	Red	-0.1	QM
37	006	CMens RR CS	B	Door		Rgt U Ctr	I	Metal	Red	0.0	QM
38	006	CMens RR CS	B	Door		Lft Rgt casing	I	Metal	Red	0.0	QM
39	006	CMens RR CS	B	Door		Lft U Ctr	I	Wood	Red	0.1	QM
40	006	CMens RR CS	A	Floor			I	Ceramic	Gray	-0.2	QM
41	007	Ceramic Off	A	Wall	L	Ctr	I	Drywall	White	0.3	QM
42	007	Ceramic Off	D	Ceiling			I	Drywall	White	-0.2	QM
43	007	Ceramic Off	D	Window		Ctr Sill	I	Wood	White	0.1	QM
44	007	Ceramic Off	A	Ceiling			I	Drywall	White	-0.1	QM

45	007	Ceramic Off	B	Door		Lft Rgt casing	I	Wood	Red	-0.1 QM
46	007	Ceramic Off	B	Door		Lft U Ctr	I	Wood	Red	-0.3 QM
47	008	Basement	A	Wall	L	Ctr	I	Concrete	White	0.0 QM
48	008	Basement	D	Ceiling			I	Wood	White	-0.1 QM
49	008	Basement	B	Fire S Pipe		Lft	I	Metal	White	0.0 QM
50	008	Basement	B	Fire S Pipe		Lft	I	Metal	White	0.3 QM
51	008	Basement	A	Duct		Ctr	I	Metal	White	0.0 QM
52	008	Basement	A	Railing		Ctr Railing	I	Metal	Brown	1.0 QM
53	009	Meet Men RR	A	Wall	L	Ctr	I	Ceramic	White	>9.9 QM
54	009	Meet Men RR	A	Floor			I	Ceramic	Tan	-0.2 QM
55	009	Meet Men RR	D	Ceiling			I	Wood	White	0.0 QM
56	009	Meet Men RR	D	Door		Ctr Rgt casing	I	Wood	White	0.3 QM
57	009	Meet Men RR	D	Door		Ctr U Ctr	I	Wood	White	0.3 QM
58	010	Meet Wom RR	D	Door		Rgt U Ctr	I	Wood	White	0.3 QM
59	010	Meet Wom RR	A	Wall	L	Ctr	I	Drywall	White	-0.1 QM
60	010	Meet Wom RR	C	Wall	L	Ctr	I	Ceramic	White	>9.9 QM
61	010	Meet Wom RR	D	Floor			I	Ceramic	Gray	0.0 QM
62	010	Meet Wom RR	D	Wall	L	Ctr	I	Ceramic	Green	-0.2 QM
63	010	Meet Wom RR	D	Ceiling			I	Wood	White	-0.1 QM
64	011	Main Lobby	A	Wall	L	Ctr	I	Drywall	White	-0.4 QM
65	011	Main Lobby	B	Wall	L	Ctr	I	Drywall	Blue	-0.3 QM
66	011	Main Lobby	B	Window		Rgt Sill	I	Wood	Brown	-0.1 QM
67	011	Main Lobby	B	Door		Ctr U Rgt	I	Wood	Brown	-0.2 QM
68	012	MainGallery	A	Wall	L	Lft	I	Drywall	White	-0.1 QM
69	012	MainGallery	D	Wall	L	Ctr	I	Drywall	White	-0.3 QM
70	012	MainGallery	A	Baseboard		Rgt	I	Wood	White	-0.4 QM
71	013	Auditorium	C	Column		Lft	I	Wood	Gray	-0.1 QM
72	013	Auditorium	B	Wall	L	Ctr	I	Wood	Tan	0.0 QM
73	013	Auditorium	C	Door		Lft Rgt jamb	I	Wood	Brown	0.0 QM
74	013	Auditorium	C	Door		Lft U Ctr	I	Wood	Tan	0.0 QM
75	013	Auditorium	A	Floor			I	Wood	Varnish	-0.1 QM
76	013	Auditorium	A	Door		Ctr U Ctr	I	Wood	Tan	-0.1 QM
77	014	Audit Lobby	D	Wall	L	Ctr	I	Drywall	White	0.0 QM
78	014	Audit Lobby	D	Baseboard		Ctr	I	Wood	White	-0.1 QM
79	014	Audit Lobby	D	Railing		Lft Railing	I	Metal	Gray	0.1 QM
80	014	Audit Lobby	B	Door		Rgt Rgt jamb	I	Wood	Gray	0.1 QM
81	014	Audit Lobby	B	Door		Ctr U Ctr	I	Wood	Gray	-0.4 QM
82	001	Exterior	A	Wall	L	Lft	I	Wood	Tan	-0.1 QM
83	001	Exterior	A	Soffit			I	Wood	Tan	0.1 QM
84	001	Exterior	A	Fascia			I	Wood	Brown	-0.1 QM
85	001	Exterior	A	Door		Ctr U Ctr	I	Wood	Red	-0.1 QM
86	001	Exterior	A	Railing		Ctr Railing	I	Metal	Red	1.0 QM
87	001	Exterior	A	Wall	L	Ctr	I	Concrete	Tan	0.1 QM
88	001	Exterior	A	Wall	U	Ctr	I	Wood	Tan	-0.3 QM
89	001	Exterior	A	Fence		Ctr	I	Wood	Red	0.0 QM
90	001	Exterior	D	Gutter			I	Metal	Tan	-0.2 QM
91	001	Exterior	D	Wall	L	Ctr	I	Wood	Tan	-0.3 QM
92	001	Exterior	C	Door		Ctr U Ctr	I	Wood	Red	0.0 QM
93	001	Exterior	C	Window		Ctr Sill	I	Wood	White	-0.3 QM
94	001	Exterior	B	Fascia			I	Wood	Tan	0.2 QM
95	001	Exterior	B	Soffit			I	Wood	Tan	0.1 QM
96		CALIBRATION								0.9 TC
97		CALIBRATION								0.8 TC
98		CALIBRATION								0.9 TC

---- End of Readings ----

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: City of Palo Alto

Inspection Date: 12/17/10
Report Date: 1/1/2011
Abatement Level: 1.0
Report No. S#01369 - 12/17/10 15:10
Total Readings: 98 Actionable: 5
Job Started: 12/17/10 15:10
Job Finished: 12/17/10 17:44

Peninsula Art Center
1313 Newell Road
Palo Alto, California

Read No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Paint Color	Lead (mg/cm≤)	Mode
Exterior Room 001 Exterior									
086	A	Railing	Ctr	Railing	I	Metal	Red	1.0	QM
Interior Room 005 Ceramics									
027	D	Door	Ctr	Rgt casing	I	Metal	Red	1.0	QM
Interior Room 008 Basement									
052	A	Railing	Ctr	Railing	I	Metal	Brown	1.0	QM
Interior Room 009 Meet Men RR									
053	A	Wall	L Ctr		I	Ceramic	White	>9.9	QM
Interior Room 010 Meet Wom RR									
060	C	Wall	L Ctr		I	Ceramic	White	>9.9	QM

---- End of Readings ----

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: City of Palo Alto

Inspection Date: 12/17/10
Report Date: 1/1/2011
Abatement Level: 1.0
Report No. S#01369 - 12/17/10 15:10
Total Readings: 98
Job Started: 12/17/10 15:10
Job Finished: 12/17/10 17:44

Peninsula Art Center
1313 Newell Road
Palo Alto, California

Read No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Paint Color	Lead (mg/cm≤)	Mode
Exterior Room 001 Exterior									
082	A	Wall	L Lft		I	Wood	Tan	-0.1	QM
087	A	Wall	L Ctr		I	Concrete	Tan	0.1	QM
088	A	Wall	U Ctr		I	Wood	Tan	-0.3	QM
084	A	Fascia			I	Wood	Brown	-0.1	QM
083	A	Soffit			I	Wood	Tan	0.1	QM
085	A	Door	Ctr	U Ctr	I	Wood	Red	-0.1	QM
086	A	Railing	Ctr	Railing	I	Metal	Red	1.0	QM
089	A	Fence	Ctr		I	Wood	Red	0.0	QM
094	B	Fascia			I	Wood	Tan	0.2	QM
095	B	Soffit			I	Wood	Tan	0.1	QM
093	C	Window	Ctr	Sill	I	Wood	White	-0.3	QM
092	C	Door	Ctr	U Ctr	I	Wood	Red	0.0	QM
091	D	Wall	L Ctr		I	Wood	Tan	-0.3	QM
090	D	Gutter			I	Metal	Tan	-0.2	QM
Interior Room 001 Meet Rm									
005	A	Wall	L Ctr		I	Drywall	White	-0.4	QM
006	B	Window	Lft	Sill	I	Wood	White	0.1	QM
004	C	Wall	L Rgt		I	Drywall	White	-0.2	QM
007	C	Door	Rgt	Rgt casing	I	Wood	White	0.3	QM
008	C	Door	Rgt	U Ctr	I	Wood	White	-0.2	QM
009	D	Ceiling			I	Drywall	White	-0.1	QM
Interior Room 002 PL Studio									
010	A	Wall	L Ctr		I	Drywall	White	-0.2	QM
011	B	Wall	L Ctr		I	Drywall	White	-0.4	QM
013	B	Door	Lft	Rgt casing	I	Wood	White	0.0	QM
014	B	Door	Lft	U Ctr	I	Metal	White	-0.1	QM
012	D	Ceiling			I	Drywall	White	0.2	QM
015	D	Door	Ctr	Rgt casing	I	Wood	White	0.1	QM
016	D	Door	Ctr	U Ctr	I	Wood	White	-0.1	QM
Interior Room 003 A &T Studio									
021	A	Wall	L Ctr		I	Drywall	White	-0.2	QM
019	B	Window	Ctr	Sill	I	Wood	White	0.1	QM
020	B	Door	Lft	U Lft	I	Wood	White	0.3	QM
022	C	Wall	L Ctr		I	Drywall	Green	-0.1	QM
018	C	Door	Lft	Rgt casing	I	Wood	White	0.4	QM
017	C	Door	Lft	U Ctr	I	Wood	White	-0.2	QM
023	D	Ceiling			I	Wood	White	-0.2	QM

Interior Room 004 Kitchen									
026	D	Wall	U	Ctr		I	Wood	White	-0.1	QM
024	D	Window		Ctr	Sill	I	Wood	Green	0.1	QM
025	D	Door		Ctr	Header	I	Wood	Green	0.2	QM
Interior Room 005 Ceramics									
030	B	Window		Ctr	Sill	I	Wood	Red	0.1	QM
031	B	Door		Ctr	Rgt jamb	I	Wood	White	0.4	QM
032	B	Door		Ctr	L Ctr	I	Wood	White	0.0	QM
033	D	Wall	L	Lft		I	Drywall	White	-0.2	QM
029	D	Window		Rgt	Sill	I	Wood	Red	0.0	QM
027	D	Door		Ctr	Rgt casing	I	Metal	Red	1.0	QM
028	D	Door		Ctr	U Ctr	I	Wood	Red	-0.3	QM
Interior Room 006 CMens RR CS									
034	A	Wall	L	Ctr		I	Ceramic	Green	-0.3	QM
040	A	Floor				I	Ceramic	Gray	-0.2	QM
038	B	Door		Lft	Rgt casing	I	Metal	Red	0.0	QM
039	B	Door		Lft	U Ctr	I	Wood	Red	0.1	QM
037	B	Door		Rgt	U Ctr	I	Metal	Red	0.0	QM
035	C	Wall	L	Ctr		I	Ceramic	Green	-0.1	QM
036	C	Stall Door		Ctr		I	Metal	Red	-0.1	QM
Interior Room 007 Ceramic Off									
041	A	Wall	L	Ctr		I	Drywall	White	0.3	QM
044	A	Ceiling				I	Drywall	White	-0.1	QM
045	B	Door		Lft	Rgt casing	I	Wood	Red	-0.1	QM
046	B	Door		Lft	U Ctr	I	Wood	Red	-0.3	QM
042	D	Ceiling				I	Drywall	White	-0.2	QM
043	D	Window		Ctr	Sill	I	Wood	White	0.1	QM
Interior Room 008 Basement									
047	A	Wall	L	Ctr		I	Concrete	White	0.0	QM
052	A	Railing		Ctr	Railing	I	Metal	Brown	1.0	QM
051	A	Duct		Ctr		I	Metal	White	0.0	QM
049	B	Fire S Pipe		Lft		I	Metal	White	0.0	QM
050	B	Fire S Pipe		Lft		I	Metal	White	0.3	QM
048	D	Ceiling				I	Wood	White	-0.1	QM
Interior Room 009 Meet Men RR									
053	A	Wall	L	Ctr		I	Ceramic	White	>9.9	QM
054	A	Floor				I	Ceramic	Tan	-0.2	QM
055	D	Ceiling				I	Wood	White	0.0	QM
056	D	Door		Ctr	Rgt casing	I	Wood	White	0.3	QM
057	D	Door		Ctr	U Ctr	I	Wood	White	0.3	QM
Interior Room 010 Meet Wom RR									
059	A	Wall	L	Ctr		I	Drywall	White	-0.1	QM
060	C	Wall	L	Ctr		I	Ceramic	White	>9.9	QM
062	D	Wall	L	Ctr		I	Ceramic	Green	-0.2	QM
061	D	Floor				I	Ceramic	Gray	0.0	QM
063	D	Ceiling				I	Wood	White	-0.1	QM
058	D	Door		Rgt	U Ctr	I	Wood	White	0.3	QM

Interior Room 011 Main Lobby									
064	A	Wall	L	Ctr		I	Drywall	White	-0.4 QM
065	B	Wall	L	Ctr		I	Drywall	Blue	-0.3 QM
066	B	Window		Rgt	Sill	I	Wood	Brown	-0.1 QM
067	B	Door		Ctr	U Rgt	I	Wood	Brown	-0.2 QM
Interior Room 012 MainGallery									
068	A	Wall	L	Lft		I	Drywall	White	-0.1 QM
070	A	Baseboard		Rgt		I	Wood	White	-0.4 QM
069	D	Wall	L	Ctr		I	Drywall	White	-0.3 QM
Interior Room 013 Auditorium									
075	A	Floor				I	Wood	Varnish	-0.1 QM
076	A	Door		Ctr	U Ctr	I	Wood	Tan	-0.1 QM
072	B	Wall	L	Ctr		I	Wood	Tan	0.0 QM
073	C	Door		Lft	Rgt jamb	I	Wood	Brown	0.0 QM
074	C	Door		Lft	U Ctr	I	Wood	Tan	0.0 QM
071	C	Column		Lft		I	Wood	Gray	-0.1 QM
Interior Room 014 Audit Lobby									
081	B	Door		Ctr	U Ctr	I	Wood	Gray	-0.4 QM
080	B	Door		Rgt	Rgt jamb	I	Wood	Gray	0.1 QM
077	D	Wall	L	Ctr		I	Drywall	White	0.0 QM
078	D	Baseboard		Ctr		I	Wood	White	-0.1 QM
079	D	Railing		Lft	Railing	I	Metal	Gray	0.1 QM
Calibration Readings									
001									0.8 TC
002									0.8 TC
003									0.8 TC
096									0.9 TC
097									0.8 TC
098									0.9 TC

---- End of Readings ----

DISTRIBUTION REPORT OF LEAD PAINT INSPECTION FOR: City of Palo Alto

Inspection Date: 12/17/10
Report Date: 1/1/2011
Abatement Level: 1.0
Report No. S#01369 - 12/17/10 15:10
Total Reading Sets: 92
Job Started: 12/17/10 15:10
Job Finished: 12/17/10 17:44

Peninsula Art Center
1313 Newell Road
Palo Alto, California

Structure	Total	Positive		Negative		Inconclusive	
		Structure Distribution					
Baseboard	2	0	<0%>	2	<100%>	0	<0%>
Ceiling	8	0	<0%>	8	<100%>	0	<0%>
Column	1	0	<0%>	1	<100%>	0	<0%>
Door Header	1	0	<0%>	1	<100%>	0	<0%>
Door L Ctr	1	0	<0%>	1	<100%>	0	<0%>
Door Rgt casing	8	1	<13%>	7	<88%>	0	<0%>
Door Rgt jamb	3	0	<0%>	3	<100%>	0	<0%>
Door U Ctr	15	0	<0%>	15	<100%>	0	<0%>
Door U Lft	1	0	<0%>	1	<100%>	0	<0%>
Door U Rgt	1	0	<0%>	1	<100%>	0	<0%>
Duct	1	0	<0%>	1	<100%>	0	<0%>
Fascia	2	0	<0%>	2	<100%>	0	<0%>
Fence	1	0	<0%>	1	<100%>	0	<0%>
Fire S Pipe	2	0	<0%>	2	<100%>	0	<0%>
Floor	4	0	<0%>	4	<100%>	0	<0%>
Gutter	1	0	<0%>	1	<100%>	0	<0%>
Railing Railing	3	2	<67%>	1	<33%>	0	<0%>
Soffit	2	0	<0%>	2	<100%>	0	<0%>
Stall Door	1	0	<0%>	1	<100%>	0	<0%>
Wall	26	2	<8%>	24	<92%>	0	<0%>
Window Sill	8	0	<0%>	8	<100%>	0	<0%>
Inspection Totals:	92	5	< 5%>	87	< 95%>	0	< 0%>

ProTech
Consulting & Engineering
1208 Main Street, Redwood City, CA 94063
(650) 569-4020 Fax (650) 569-4023

Date: January 31, 2011
Report #: 057-MA1
CIH: Kelly Moriki
Certification #: 7092

L PRELIMINARY MOLD INSPECTION REPORT

LIMITED TO:

Green Room

CONDUCTED AT:

Peninsula Art Center
1313 Newell Street
Palo Alto, California

PREPARED FOR

City of Palo Alto
P.O. Box 10250
Palo Alto, California 94303

PREPARED BY:
PROTECH CONSULTING AND ENGINEERING

INTRODUCTION

On January 28, 2011, **ProTech Consulting and Engineering** conducted a preliminary mold investigation of the Green Room at the Peninsula Art Center located at 1313 Newell, Palo Alto, California. Mold investigation services were performed by Ron Mason of ProTech.

Scope:
The investigation consisted of a visual inspection for mold growth on the interior building surfaces.

Limitations:
ProTech was limited to the green room only.

The investigation did not include the collection of air samples.

No destructive testing was done. The walls and the ceilings were not damaged to ascertain if there was mold growth inside of the walls. There is a possibility that there may be mold growth present in the walls.

OBSERVATIONS AND FINDINGS

Visible Mold Growth

Room/Area	Specific Location and Surfaces of Mold Growth	Description	Approx. Quantity	Sample No.
Right window	Green room	Black	<1 sq. ft.	T-01

Note: Additional mold growth may exist behind walls.

Relative Humidity (RH):

Area	Readings		Acceptable Upper Limit	Assessment
	RH%	Temperature		
Green room	56.9	61.5	60%	**Normal**
Outside	63.2	49.6		

Note: A "high" RH assessment indicates a condition that will potentially promote and/or sustain mold growth.

Moisture Content (MC):

Area & Building Component	MC Range%	Acceptable Upper Limit	Assessment
All components inside of the Green Room	<10	15%	**Normal**

Note: A "high" MC assessment is an indication of moisture intrusion. There is a possibility that there may be some mold growth in the walls or ceiling where elevated moisture was found. Mold growth may occur at any time until the moisture levels are reduced. The mold growth may be different than what was found on the outside of the area.

SAMPLE RESULTS

The mold samples collected at this site were analyzed at the Forensic Analytical Laboratory in Hayward, California. Forensic's laboratory report is attached in Appendix 1.

The mold species identified during laboratory analysis of the samples collected at this site are commonly found outdoors and indoors when growth conditions are favorable. See appendix 1 for additional information regarding the mold found.

RECOMMENDATIONS

1. If not already done so, find and correct the moisture conditions associated with the following areas:

   - Windows

   Contact a general contractor or other water intrusion specialist to determine how the moisture is entering the site and how to eliminate its source and to identify any other potential water intrusion locations.

2. Remove the mold on the windows by wiping with a mild detergent and water, followed by a biocide (10 to 1 solution of household bleach or commercially available product) to kill any remaining mold spores.

3. Repair window so it securely closes. The window wasn't securely closed and may allow for future water intrusion.

4. Clean or replace carpets to remove any possible mold contamination from past leaks adjacent to the window that opens.

EXCLUSIONS AND REPORT LIMITATIONS

ProTech's mold consulting services were limited to an inspection of exposed and visibly accessible surfaces in the scope of work areas of the subject site. No destructive inspection methods were employed to discover or quantify the presence of mold in hidden or unseen areas. ProTech cannot warranty that mold does not exist in locations that were visibly inaccessible during the time of ProTech's inspection.

The assessments and recommendations made in this report are specific to the current conditions observed on the date of ProTech's inspection. Mold and fungi are ubiquitous naturally occurring living organisms that reproduce under suitable conditions. Any future changes in humidity, moisture, temperature, or other environmental changes may produce suitable conditions for mold growth. ProTech cannot anticipate site changes and cannot be held liable for mold growth subsequent to this report.

This inspection report has been prepared by ProTech for the exclusive use of ProTech and its client, and not for use by any other party. The investigation and sampling plan discussed in this report may not be appropriate for uses beyond its intended purpose and stated scope. Any use by a third party of any of the information contained in this report shall be at their own risk and shall constitute a release and an agreement to defend and indemnify ProTech from any and all liability in connection therewith whether arising out of ProTech's negligence or otherwise.

The process of remediating mold growth problems requires two actions:

1. The proper and complete abatement of existing mold, and
2. The elimination of the water/moisture intrusion source.

The success of these two actions are interdependent. If either action is improperly or incompletely performed, the mold problem will continue and perhaps be exacerbated. Without a properly executed mold and water intrusion remediation plan, mold growth will continue and new species of mold growth may be promoted. ProTech recommends that only highly skilled and properly credentialed remediation and water intrusion specialists be hired to perform mold correction work.

ProTech accepts no liability for continued or new mold growth that may occur subsequent to this inspection date.

ProTech has provided information on mold as a general reference. However, a doctor should be consulted on how these molds may affect you. ProTech cannot provide any medical advice.

Ron Mason
Industrial Hygienist

Kelly Moriki
Certified Industrial Hygienist, 7092

Mold Resources

This information is provided as additional reference information.

EPA http://www.epa.gov/iaq/molds/
Mold Remediation in Schools and Commercial Buildings
April, 2001 guidance from U.S. E.P.A. on preventing, investigating, evaluating and removing or cleaning up moisture and mold problems. This document is specifically directed to schools and commercial buildings, but contains information that is helpful to home owners and renters as well.

State of California http://www.cal-iaq.org/
This site contains fact sheets on several indoor air quality problems including molds, asbestos, radon, ozone-generating air cleaners, and guidance for hiring an indoor air quality consultant. it also contains links to many other websites with helpful information on indoor air quality.

New York City Department of Health and Mental Hygiene
http://nycdoitt.ci.nyc.ny.us/html/doh/html/epi/epimold/html
Mold Fact Sheet
http://www.ci.nyc.us/html/doh/html/epi/moldrptl.html
"Guidelines on Assessment and Remediation of Fungi in Indoor Environments" Informative document that includes information on health issues, hazard communication, assessment, and remediation.

Center for Disease Control http://www.cdc.gov/nceh/asthma/factsheets/molds/molds.htm
Concise information on molds in the environment: mold types, their possible human health effects, where molds are found and recommendations for decreasing indoor mold exposure.

National Institute of Allergy and Infectious Disease - Mold Allergy website
http://www.niaid.nih.gov/publications/allergens/mold.htm
Various mold questions and answers.

NIEHS http://www.niehs.nih.gov/
NIEHS has many articles and research papers devoted to mold and related topics. Enter "mold" in the "Search" field to find available information.

National Library of Medicine-Mold website http://www.nlm.nih.gov/medlineplus/molds.html
Provides links to general mold documents, as well as articles on prevention, screening and Farmer's Lung. Also provides a Spanish link.

University of Minnesota http://www.dehs.umn.edu/iaq/fungus/glossary.html
University of Minnesota fungal glossary: short descriptions of commonly identified environmental fungi (Aspergillus, Penicillium, Alternaria, etc.). Also has links to mold photographs and references.
http://www.dehs.umn.edu/iaq/flood.html
University of Minnesota site describes a systematic approach for appropriately cleaning up water problems in buildings due to floods, roof leaks, potable water leaks, sewage backup, steam leaks and groundwater infiltration.

EML LAB info www.emlab.com
Glossary of mold information on species.

Lumber Yard Mold info www.wwpa.org
Western Wood Products Association, Mold, Housing & Wood publication
www.thecohengroup.com/vol4i3, Lumber yard article

OSHA – www.osha.gov A Brief Guide to Mold

Forensic Analytical Laboratories

Final Report

Non-Viable Bulk Fungal Analysis

Protech Consulting & Engineers Inc.
Ron Mason

1208 Main St.
Redwood City, CA 94063

Sample Type: Tape Lift
Analysis: Direct Microscopy - Qualitative (visual area estimation); FASI Method IAQ 102
Job ID / Site: 057-NA11; 1313 Newell Rd, Palo Alto, Green Room; P.O.# 0128-057-01

Client ID: 1454
Report Number: F087687
FALI Job ID: 1454
Date Received: 01/28/11
Date Analyzed: 01/28/11
Date Printed: 01/28/11
First Reported: 01/28/11

Total Samples Submitted: 1
Total Samples Analyzed: 1

Lab Number	**40109869**		
Sample ID	**T01**		
Location	Suspect mold right window		
Sample Date	01/28/11		
Organism	**Relative Density**	**Relative Density**	**Relative Density**
Alternaria	Trace		
Ascospores	Trace		
Basidiospores	Trace		
Cladosporium	Minor		
Curvularia	Trace		
Epicoccum	Trace		
HYPHAE	Trace		
Penicillium / Aspergillus	Trace		
Rusts/smuts/myxomycetes	Trace		
Particulate Density	**Abundant**		
Comments			

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

Forensic Analytical Laboratories

Non-Viable Bulk Fungal Analysis

Protech Consulting & Engineers Inc.
Ron Mason

1208 Main St.
Redwood City, CA 94063

Client ID: 1454
Report Number: F087687
FALI Job ID: 1454
Date Received: 01/28/11
Date Analyzed: 01/28/11
Date Printed: 01/28/11
First Reported: 01/28/11

Sample Type: Tape Lift
Analysis: Direct Microscopy - Qualitative (visual area estimation); FASI Method IAQ 102
Job ID / Site: 057-NA11; 1313 Newell Rd, Palo Alto, Green Room; P.O.# 0128-057-01

Total Samples Submitted: 1
Total Samples Analyzed: 1

Explanations:

Relative Density	Relative amount of fungi present
Particulate Density	Amount of background particulate present

Density Estimated As Follows:

Trace	Very little present
Minor	Present but not in large quantity
Major	Present in most of sample
Abundant	Covering almost entire sample
Overloaded	Covering entire sample

Guidelines For Interpretation of Non-Viable Bulk Results:
No accepted quantitative regulatory standards currently exist by which to assess the health risks related to mold exposure. Molds have been associated with a variety of health effects and sensitivity varies from person to person.

Several organizations, including: the American Conference of Governmental Industrial Hygienists (ACGIH); the American Industrial Hygiene Association (AIHA); the Indoor Air Quality Association (IAQA); the United States Environmental Protection Agency (USEPA); the Centers for Disease Control (CDC), as well as the California Department of Health Services (CADHS), have all published guidelines for assessment and interpretation of mold resulting from water intrusion in buildings.

FALI reports solely the organisms observed on the sample(s). The limit of detection is based on observing one spore/colony per area analyzed. This is not an inclusive list of the fungal types identified in the microbiology laboratory.

Melissa Piercey, Microbiology Laboratory Supervisor, Hayward Laboratory

3777 Depot Road, Suite 409, Hayward, CA 94545 / Telephone: (510) 887-8828 (800) 827-FASI / Fax: (510) 887-4218

ProTech Consulting & Engineering
1208 Main Street
Redwood City, CA 94063
Phone: (650) 569-4020 Fax: (650) 569-4023
Environmental Services

Page ______ of ______
Job # 057-MA11
P.O. # 0128-057-01

General Information

Date: 1-28-11
Job ID: 1313 NEWELL Rd
PALO ALTO
Green Room
Collected By: Ron
Lab: Forensic

Analysis Requested

- ☐ PCM NIOSH 7400
- ☐ TEM
  - ○ AHERA
  - ○ Level 2
  - ○ Bulk Quantitative
  - ○ Bulk Qualitative
- ☐ PLM BULK - EPA/600/R/116
- ☐ Lead
  - ○ AA
  - ○ TTLC
  - ○ STLC
  - ○ TCLP
- ☒ Mold Direct
- ☐ Other ______

Turn Around Time

- ☒ Rush Same day
- ☐ 12 hours
- ☐ 24 hours
- ☐ 48 hours
- ☐ 3-5 days
- ☐ ______

Special Instructions

☐ Prior Positive

Filter Type: ☐ MCE, 0.8 μm, 25mm ☐ MCE, 0.45μm, 25mm ☐ MCE, 0.8μm, 37mm ☐ Other ______

Sample # / Date	Sample Type	Sample Protocol	Location / Activity / Material Description	Time On/Off	LPM	Total Min. / Total Vol. / Fibers/Fields	Results
# T01	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.	Suspect MOLD right window	on off pump#	on end Ave Roto#		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on off pump#	on end Ave Roto#		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on off pump#	on end Ave Roto#		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on off pump#	on end Ave Roto#		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on off pump#	on end Ave Roto#		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on off pump#	on end Ave Roto#		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on off pump#	on end Ave Roto#		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on off pump#	on end Ave Roto#		
#	☐ Post ☐ Area ☐ Background ☐ Personal ☐ Blank ☐ Bulk	☐ Amb. ☐ ALS ☐ Agg.		on off pump#	on end Ave Roto#		

CHAIN OF CUSTODY

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	1-28-11	[signature] 1173	1/28/11

WHITE - RETAIN WITH SAMPLES CANARY - FILE COPY

HAZARDOUS MATERIALS

ProTech has identified Non-PCB light ballasts and mercury vapor light tubes at the peninsula Art Center of Palo Alto. There are approximately 404 non-PCB light ballasts and 693 4 foot mercury vapor light tubes, 108 3 foot mercury vapor light tubes, 6 2 foot mercury vapor light tubes at the site. The Contractor shall properly removal, package, and label these item as follows:

1. MERCURY VAPOR LIGHT TUBES

A. The Contractor shall remove all mercury vapor light tubes and mercury switch thermostats on-site and prepare them for recycling or disposal.

B. The Contractor shall ensure that they do not contaminate the site during this removal and packaging process.

C. As directed by the Engineer, the Contractor shall recycle the mercury vapor tubes and mercury switch thermostats, instead of disposing of them.

EXHIBIT B
SCHEDULE OF PERFORMANCE

CONTRACTOR shall perform the Services so as to complete the task within the time period specified below. The time to complete the task may be increased or decreased by mutual written agreement of the project managers for CONTRACTOR and CITY so long as all work is completed within the term of the Agreement. Upon request CONTRACTOR shall provide a detailed schedule of work consistent with the schedule below.

Task	**Complete** **_X_ Days or** **____ Weeks** **From NTP**
1. Perform all hazardous materials abatement at the Palo Alto Art Center facility in accordance with the Scope listed in Exhibit A.	**30 Calendar days**

EXHIBIT C
SCHEDULE OF FEES

BIDDER (COMPANY): TradeStaff Contracting Services DATE: 3-20-11

BIDDER'S BID PAGES **SECTION III**

Bidder's Response and Acceptance
In response to this Request for Quotations (RFQ), the undersigned, as Bidder, declares that the only persons or parties interested in this Bid as principals are those named herein; that this Bid is made without collusion with any other person, firm or corporation; that the Bidder has carefully examined the specifications herein referred to; and the Bidder proposes and agrees, if this Bid is accepted, that the Bidder will contract with the City of Palo Alto (City), to provide all necessary materials and/or services, and furnish the specified requirements in this RFQ, in the manner herein prescribed and at the prices stated.

Project Title: Palo Alto Art Center Hazardous Materials Abatement Project, Request for Quotations (RFQ) number140517

Quotation Due Date: 3:00 p.m., Tuesday, March 22, 2011.

A: Base Bid: Service shall consist of furnishing all labor, equipment material, transportation, and applicable taxes, profit, insurance, bonds, and other overhead to perform the work in accordance with Section III, Scope of Services, Specifications and General Requirements, herein:

ITEM #	QTY.	U/M	DESCRIPTION, WITH UNIT PRICE IN WORDS (PRICE IS INCLUSIVE OF ALL APPLICABLE TAXES)	UNIT PRICE	TOTAL ITEM PRICE
			ASBESTOS ABATEMENT (Applies to items 1 through 11)		
1.	60,000	SF	Wall/ceiling sheetrock, joint tape and compound: (Unit Price in words: Seventy three cents per squ. ft.)	$ .73	43,800
2.	40	SF	Tan 12 x 12 vinyl floor tile with black mastic: (Unit Price in words: three dollars per squ. ft.)	$ 3.00	120
3.	40	SF	Gray 9 x 9 vinyl floor tile with non-asbestos mastic: (Unit Price in words: two dollars per squ ft.)	$ 2.00	80
4.	3,500	SF	Tan 12 x 12 vinyl floor tile (with fissures) with black mastic: (Unit Price in words: one dollar and sixty cents per square ft)	$ 1.60	5600

EXHIBIT C
SCHEDULE OF FEES

BIDDER (COMPANY): Trade Staff Contracting Services DATE: 3-20-11

BIDDER'S BID PAGES **SECTION III**

ITEM #	QTY.	U/M	DESCRIPTION, WITH UNIT PRICE IN WORDS (PRICE IS INCLUSIVE OF ALL APPLICABLE TAXES)	UNIT PRICE	TOTAL ITEM PRICE
5.	1,500	SF	Gray 9 x 9 vinyl floor tile and black mastic: (Unit Price in words: one dollar and fifty cents per square ft.)	$ 1.50	2250
6.	2,000	SF	Black mastic below black 12 x 12 vinyl floor tile: (Unit Price in words: one dollar per squ. ft.)	$ 1.00	2,000
7.	7,500	SF	Beige 12 x 12 vinyl floor tile and black mastic: (Unit Price in words: one dollar and fifty cents per sq. ft.)	$ 1.50	11,250
8.	3,000	LF	White TSI on water pipes: (Unit Price in words: two dollars per L/f)	$ 2.00	6,000
9.	100	SF	White pipe hanger insulation paper: (Unit Price in words: one dollar fifty cents per sq. ft.)	$ 1.50	150
10.	32,000	SF	Gray/black roof felt below wood shake and curbed (Includes removal and disposal of all roofing wood shakes and accessories): (Unit Price in words: ninety cents per squ. ft.)	$ .90	27,000
11.	10	SF	Gray mastic for roof mounted mechanicals: (Unit Price in words: thirty dollars per sq. ft.)	$ 30	300

28,800.00

BIDDER (COMPANY): TradeStaff Contracting Services DATE: 3-20-11

BIDDER'S BID PAGES SECTION III

ITEM #	QTY.	U/M	DESCRIPTION, WITH UNIT PRICE IN WORDS (PRICE IS INCLUSIVE OF ALL APPLICABLE TAXES)	UNIT PRICE	TOTAL ITEM PRICE
12.	1	LS	Roof Covering: Upon removal of all roofing materials, Contractor shall furnish and install approx. 32,000 sf of temporary roof protection. Protection shall consist of 30lb single ply felt building paper (or equal), installed over all exposed roof areas and fastened in a manner to ensure a watertight installation. All roof penetrations shall be sealed as well upon exiting site). (Unit Price in words: nineteen thousand five hundred and twenty dollars	xxxxxxxxxx	19,520
13.	1	SF	Mold Remediation: Remediate approx. 1 sf of mold in the Green Room per ProTech's "Mold Inspection Report" dated 1/31/2011 and provide temporary weather protection as appropriate. Potential unknown mold may present. Additional services may be issued base on this price per sf. (Unit Price in words: three hundred seventy dollars)	$ 370	370
14.	1	LS	Lights Removal: Remove and dispose/recycle six hundred ninety three (693) 4-ft long, one hundred eight (108) 3-ft long and six (6) 2-ft long mercury vapor light tubes. (Unit Price in words: two thousand eight hundred and ten)	Xxxxxxxxxx	2810
15.	1	LS	Dry rot Allowance: Contractor shall include in bid the removal and installation of approximately 3,200SF of ½" fire rated plywood at roof location. All disposal costs shall be included in this allowance. (Unit Price in words: TWO THOUSAND DOLLARS)	Xxxxxxxxxx	$2,000.00
16.	1	LS	Tree Protection. (Unit Price in words: eighteen hundred dollars)	Xxxxxxxxxx	1800
17.	1	LS	Art Protection. (Unit Price in words: two thousand six hundred fifty dollars	Xxxxxxxxxx	2650

2,650.00

EXHIBIT C
SCHEDULE OF FEES

BIDDER (COMPANY): TradeSmart Contracting Services DATE: 3-30-11

BIDDER'S BID PAGES **SECTION III**

ITEM #	QTY.	U/M	DESCRIPTION WITH UNIT PRICE IN WORDS (PRICE IS INCLUSIVE OF ALL APPLICABLE TAXES)	UNIT PRICE	TOTAL ITEM PRICE
18.	1	LS	Fencing. (Unit Price in words: two thousand five hundred dollars)	Xxxxxxxxxx xxxxxxxxxx xxxxxxxxxx xxxxxxxxxx xxxxxxxxxx xxxxxxxxxx	2,500
19.	1	LS	Drywall Ceiling Allowance: Contractor shall include in bid an allowance for removal of undetermined drywall ceiling. (Unit Price in words: SEVEN THOUSAND FIVE HUNDRED DOLLARS)	Xxxxxxxxxx xxxxxxxxxx xxxxxxxxxx xxxxxxxxxx xxxxxxxxxx xxxxxxxxxx xxxxxxxxxx	$7,500.00
Base Bid Total (items 1 and 19 with all applicable taxes and fees included) (Total Price in words: one hundred thirty seven thousand six hundred and ninty dollars)					$ 137,690.00 #139,500.00

corrected and bidder notified. Jose'

Lowest Responsible Bidder
The lowest bid shall be the lowest total of the Base Bid Items.

Project Schedule
Time is of the essence. Work hereunder shall begin on the date specified on the City's Notice to Proceed, and shall be completed within thirty (30) calendar days after the commencement date specified in the City's Notice to Proceed.

Insurance
The Bidder shall bear all costs and provide insurance as required by Section II, *Insurance Requirements*, herein.

PAYMENT TERMS: net 30 days per 30 day progress billings 10% retention

Signature must be the same as signature in Section I – Request for Quotation and Bidder Required Information.

Signature: _____
(Signature)

James Morris
(Print name)

PLEASE NOTE:

Your signature above and bid submittal shall indicate that you have carefully examined all Bid Documents and that you fully understand the scope of work and the requirements by the City of Palo Alto.

Art Center Haz Mat Abatement Project
Attachment D - Bid Summary
RFQ# 140517

#	BASE BID A DESCRIPTION	QUANTITY	UNITS	Tradestaff Contracting		Midwest Env.		Asbestos Management	
1	Wall/Ceiling sheetrock, joint tape and compound	60,000	SF	$ 0.73	$ 43,800.00	$ 0.94	$ 56,400.00	$ 1.00	$ 60,000.00
2	Tan 12 x 12 vinyl floor tile w/black mastic	40	SF	$ 3.00	$ 120.00	$ 7.93	$ 317.20	$ 3.00	$ 120.00
3	Gray 9 x 9 vinyl floor tile w/non-asbestos mastic	40	SF	$ 2.00	$ 80.00	$ 5.92	$ 236.80	$ 3.00	$ 120.00
4	Tan 12 x 12 vinyl floor tile (w/fissures) w/black mastic	3,500	SF	$ 1.60	$ 5,600.00	$ 1.44	$ 5,040.00	$ 2.50	$ 8,750.00
5	Gray 9 x 9 vinyl floor tile w/black mastic	1,500	SF	$ 1.50	$ 2,250.00	$ 1.44	$ 2,160.00	$ 2.50	$ 3,750.00
6	Black mastic below black 12 x 12 vinyl floor tile	2,000	SF	$ 1.00	$ 2,000.00	$ 1.45	$ 2,900.00	$ 2.50	$ 5,000.00
7	Beige 12 x 12 vinyl floor tile and black mastic	7,500	SF	$ 1.50	$ 11,250.00	$ 1.21	$ 9,075.00	$ 2.25	$ 16,875.00
8	White TSI on water pipes	3,000	SF	$ 2.00	$ 6,000.00	$ 5.08	$ 15,240.00	$ 4.00	$ 12,000.00
9	White pipe hanger insulation paper	100	SF	$ 1.50	$ 150.00	$ 6.62	$ 662.00	$ 5.00	$ 500.00
10	Gray/black roof felt below roof shake	32,000	SF	$ 0.90	$ 28,800.00	$ 1.56	$ 49,920.00	$ 1.70	$ 54,400.00
11	Gray mastic for roof mounted mechanical	10	SF	$ 30.00	$ 300.00	$ 67.20	$ 672.00	$ 15.00	$ 150.00
12	Roof covering	1	LS	$ 19,520.00	$ 19,520.00	$ 11,204.70	$ 11,204.70	$ 17,000.00	$ 17,000.00
13	Mold remediation	1	SF	$ 370.00	$ 370.00	$ 361.73	$ 361.73	$ 5.00	$ 5.00
14	Lights removal	1	LS	$ 2,810.00	$ 2,810.00	$ 3,134.99	$ 3,134.99	$ 1,800.00	$ 1,800.00
15	Dry rot allowance	1	LS	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00
16	Tree protection	1	LS	$ 1,800.00	$ 1,800.00	$ 1,231.15	$ 1,231.15	$ 1,500.00	$ 1,500.00
17	Art protection	1	LS	$ 2,650.00	$ 2,650.00	$ 1,427.98	$ 1,427.98	$ 5,000.00	$ 5,000.00
18	Fencing	1	LS	$ 2,500.00	$ 2,500.00	$ 3,725.00	$ 3,725.00	$ 4,800.00	$ 4,800.00
19	Drywall ceiling allowance	1	LS	$ 7,500.00	$ 7,500.00	$ 7,500.00	$ 7,500.00	$ 7,500.00	$ 7,500.00
	BASE BID A TOTAL				**$ 139,500.00**		**$ 173,208.55**		**$ 201,270.00**

Art Center Haz Mat Abatement Project
Attachment D - Bid Summary
RFQ# 140517

#	BASE BID A DESCRIPTION	QUANTITY	UNITS	Professional Asbestos		Urban Metro Env.		Flores Sierra	
1	Wall/Ceiling sheetrock, joint tape and compound	60,000	SF	$ 0.95	$ 57,000.00	$ 2.01	$ 120,600.00	$ 1.00	$ 60,000.00
2	Tan 12 x 12 vinyl floor tile w/black mastic	40	SF	$ 10.00	$ 400.00	$ 1.85	$ 74.00	$ 2.75	$ 110.00
3	Gray 9 x 9 vinyl floor tile w/non-asbestos mastic	40	SF	$ 10.00	$ 400.00	$ 1.85	$ 74.00	$ 2.75	$ 110.00
4	Tan 12 x 12 vinyl floor tile (w/fissures) w/black mastic	3,500	SF	$ 1.75	$ 6,125.00	$ 1.85	$ 6,475.00	$ 2.25	$ 7,875.00
5	Gray 9 x 9 vinyl floor tile w/black mastic	1,500	SF	$ 1.75	$ 2,625.00	$ 1.85	$ 2,775.00	$ 2.25	$ 3,375.00
6	Black mastic below black 12 x 12 vinyl floor tile	2,000	SF	$ 1.75	$ 3,500.00	$ 1.85	$ 3,700.00	$ 2.25	$ 4,500.00
7	Beige 12 x 12 vinyl floor tile and black mastic	7,500	SF	$ 1.75	$ 13,125.00	$ 1.85	$ 13,875.00	$ 2.00	$ 15,000.00
8	White TSI on water pipes	3,000	SF	$ 8.00	$ 24,000.00	$ 2.00	$ 6,000.00	$ 4.00	$ 12,000.00
9	White pipe hanger insulation paper	100	SF	$ 10.00	$ 1,000.00	$ 3.00	$ 300.00	$ 5.00	$ 500.00
10	Gray/black roof felt below roof shake	32,000	SF	$ 1.75	$ 56,000.00	$ 1.85	$ 59,200.00	$ 3.00	$ 96,000.00
11	Gray mastic for roof mounted mechanical	10	SF	$ 75.00	$ 750.00	$ 1.85	$ 18.50	$ 2.75	$ 27.50
12	Roof covering	1	LS	$ 25,500.00	$ 25,500.00	$ 2,904.00	$ 2,904.00	$ 25,000.00	$ 25,000.00
13	Mold remediation	1	SF	$ 1,000.00	$ 1,000.00	$ 5.00	$ 5.00	$ 5.00	$ 5.00
14	Lights removal	1	LS	$ 4,800.00	$ 4,800.00	$ 4,000.00	$ 4,000.00	$ 4,614.00	$ 4,614.00
15	Dry rot allowance	1	LS	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00
16	Tree protection	1	LS	$ 8,000.00	$ 8,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00
17	Art protection	1	LS	$ 7,500.00	$ 7,500.00	$ 5,000.00	$ 5,000.00	$ 4,000.00	$ 4,000.00
18	Fencing	1	LS	$ 5,000.00	$ 5,000.00	$ 15,000.00	$ 15,000.00	$ 2,200.00	$ 2,200.00
19	Drywall ceiling allowance	1	LS	$ 7,500.00	$ 7,500.00	$ 7,500.00	$ 7,500.00	$ 7,500.00	$ 7,500.00
	BASE BID A TOTAL				**$ 226,225.00**		**$ 254,500.50**		**$ 249,816.50**

Art Center Haz Mat Abatement Project
Attachment D - Bid Summary
RFQ# 140517

#	BASE BID A DESCRIPTION	QUANTITY	UNITS	Restec Contractors		Reliance Construction		PARC	
1	Wall/Ceiling sheetrock, joint tape and compound	60,000	SF	$ 0.80	$ 48,000.00	$ 1.80	$ 108,000.00	$ 1.35	$ 81,000.00
2	Tan 12 x 12 vinyl floor tile w/black mastic	40	SF	$ 1.8000	$ 72.00	$ 2.00	$ 80.00	$ 4.30	$ 172.00
3	Gray 9 x 9 vinyl floor tile w/non-asbestos mastic	40	SF	$ 0.90	$ 36.00	$ 2.00	$ 80.00	$ 4.30	$ 172.00
4	Tan 12 x 12 vinyl floor tile (w/fissures) w/black mastic	3,500	SF	$ 1.80	$ 6,300.00	$ 2.00	$ 7,000.00	$ 4.30	$ 15,050.00
5	Gray 9 x 9 vinyl floor tile w/black mastic	1,500	SF	$ 1.80	$ 2,700.00	$ 2.00	$ 3,000.00	$ 4.30	$ 6,450.00
6	Black mastic below black 12 x 12 vinyl floor tile	2,000	SF	$ 1.50	$ 3,000.00	$ 2.00	$ 4,000.00	$ 4.30	$ 8,600.00
7	Beige 12 x 12 vinyl floor tile and black mastic	7,500	SF	$ 1.80	$ 13,500.00	$ 2.00	$ 15,000.00	$ 4.30	$ 32,250.00
8	White TSI on water pipes	3,000	SF	$ 12.00	$ 36,000.00	$ 7.00	$ 21,000.00	$ 24.80	$ 74,400.00
9	White pipe hanger insulation paper	100	SF	$ 25.00	$ 2,500.00	$ 10.00	$ 1,000.00	$ 45.00	$ 4,500.00
10	Gray/black roof felt below roof shake	32,000	SF	$ 2.90	$ 92,800.00	$ 2.00	$ 64,000.00	$ 1.88	$ 60,160.00
11	Gray mastic for roof mounted mechanical	10	SF	$ 4.00	$ 40.00	$ 80.00	$ 800.00	$ 6.00	$ 60.00
12	Roof covering	1	LS	$ 15,500.00	$ 15,500.00	$ 14,000.00	$ 14,000.00	$ 11,000.00	$ 11,000.00
13	Mold remediation	1	SF	$ 5.00	$ 5.00	$ 200.00	$ 200.00	$ 330.00	$ 330.00
14	Lights removal	1	LS	$ 1,608.00	$ 1,608.00	$ 15,000.00	$ 15,000.00	$ 1,700.00	$ 1,700.00
15	Dry rot allowance	1	LS	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00
16	Tree protection	1	LS	$ 9,000.00	$ 9,000.00	$ 2,000.00	$ 2,000.00	$ 1,500.00	$ 1,500.00
17	Art protection	1	LS	$ 9,000.00	$ 9,000.00	$ 1,500.00	$ 1,500.00	$ 1,000.00	$ 1,000.00
18	Fencing	1	LS	$ 6,000.00	$ 6,000.00	$ 4,000.00	$ 4,000.00	$ 6,200.00	$ 6,200.00
19	Drywall ceiling allowance	1	LS	$ 7,500.00	$ 7,500.00	$ 7,500.00	$ 7,500.00	$ 7,500.00	$ 7,500.00
	BASE BID A TOTAL				**$ 255,561.00**		**$ 270,160.00**		**$ 314,044.00**

Art Center Haz Mat Abatement Project
Attachment D - Bid Summary
RFQ# 140517

#	BASE BID A DESCRIPTION	QUANTITY	UNITS	Bayview Env.		Janus Corp		American Tech	
1	Wall/Ceiling sheetrock, joint tape and compound	60,000	SF	$ 2.00	$ 120,000.00	$ 2.00	$ 120,000.00	$ 3.00	$ 180,000.00
2	Tan 12 x 12 vinyl floor tile w/black mastic	40	SF	$ 8.00	$ 320.00	$ 2.00	$ 80.00	$ 3.00	$ 120.00
3	Gray 9 x 9 vinyl floor tile w/non-asbestos mastic	40	SF	$ 8.00	$ 320.00	$ 2.00	$ 80.00	$ 3.00	$ 120.00
4	Tan 12 x 12 vinyl floor tile (w/fissures) w/black mastic	3,500	SF	$ 2.00	$ 7,000.00	$ 2.00	$ 7,000.00	$ 3.00	$ 10,500.00
5	Gray 9 x 9 vinyl floor tile w/black mastic	1,500	SF	$ 2.00	$ 3,000.00	$ 2.00	$ 3,000.00	$ 3.00	$ 4,500.00
6	Black mastic below black 12 x 12 vinyl floor tile	2,000	SF	$ 2.00	$ 4,000.00	$ 2.00	$ 4,000.00	$ 3.00	$ 6,000.00
7	Beige 12 x 12 vinyl floor tile and black mastic	7,500	SF	$ 2.00	$ 15,000.00	$ 2.00	$ 15,000.00	$ 3.00	$ 22,500.00
8	White TSI on water pipes	3,000	SF	$ 7.00	$ 21,000.00	$ 15.00	$ 45,000.00	$ 20.00	$ 60,000.00
9	White pipe hanger insulation paper	100	SF	$ 40.00	$ 4,000.00	$ 50.00	$ 5,000.00	$ 20.00	$ 2,000.00
10	Gray/black roof felt below roof shake	32,000	SF	$ 2.50	$ 80,000.00	$ 3.24	$ 103,680.00	$ 3.00	$ 96,000.00
11	Gray mastic for roof mounted mechanical	10	SF	$ 60.00	$ 600.00	$ 10.00	$ 100.00	$ 10.00	$ 100.00
12	Roof covering	1	LS	$ 38,000.00	$ 38,000.00	$ 16,000.00	$ 16,000.00	$ 44,000.00	$ 44,000.00
13	Mold remediation	1	SF	$ 500.00	$ 500.00	$ 100.00	$ 100.00	$ 10.00	$ 10.00
14	Lights removal	1	LS	$ 4,300.00	$ 4,300.00	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00
15	Dry rot allowance	1	LS	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00
16	Tree protection	1	LS	$ 2,500.00	$ 2,500.00	$ 2,000.00	$ 2,000.00	$ 20,000.00	$ 20,000.00
17	Art protection	1	LS	$ 2,500.00	$ 2,500.00	$ 3,000.00	$ 3,000.00	$ 10,000.00	$ 10,000.00
18	Fencing	1	LS	$ 7,500.00	$ 7,500.00	$ 1,500.00	$ 1,500.00	$ 10,000.00	$ 10,000.00
19	Drywall ceiling allowance	1	LS	$ 7,500.00	$ 7,500.00	$ 7,500.00	$ 7,500.00	$ 75,000.00	$ 75,000.00
	BASE BID A TOTAL				**$ 320,040.00**		**$ 340,040.00**		**$ 547,850.00**

Art Center Haz Mat Abatement Project
Attachment D - Bid Summary
RFQ# 140517

#	BASE BID A DESCRIPTION	QUANTITY	UNITS	Meza Env.	
1	Wall/Ceiling sheetrock, joint tape and compound	60,000	SF	$ 2.50	$ 150,000.00
2	Tan 12 x 12 vinyl floor tile w/black mastic	40	SF	$ 2.2500	$ 90.00
3	Gray 9 x 9 vinyl floor tile w/non-asbestos mastic	40	SF	$ 2.25	$ 90.00
4	Tan 12 x 12 vinyl floor tile (w/fissures) w/black mastic	3,500	SF	$ 2.25	$ 7,875.00
5	Gray 9 x 9 vinyl floor tile w/black mastic	1,500	SF	$ 2.25	$ 3,375.00
6	Black mastic below black 12 x 12 vinyl floor tile	2,000	SF	$ 2.25	$ 4,500.00
7	Beige 12 x 12 vinyl floor tile and black mastic	7,500	SF	$ 2.25	$ 16,875.00
8	White TSI on water pipes	3,000	SF	$ 20.00	$ 60,000.00
9	White pipe hanger insulation paper	100	SF	$ 20.00	$ 2,000.00
10	Gray/black roof felt below roof shake	32,000	SF	$ 14.50	$ 464,000.00
11	Gray mastic for roof mounted mechanical	10	SF	$ 50.00	$ 500.00
12	Roof covering	1	LS	$ 27,000.00	$ 27,000.00
13	Mold remediation	1	SF	$ 100.00	$ 100.00
14	Lights removal	1	LS	$ 3,760.00	$ 3,760.00
15	Dry rot allowance	1	LS	$ 2,000.00	$ 2,000.00
16	Tree protection	1	LS	$ 4,000.00	$ 4,000.00
17	Art protection	1	LS	$ 6,000.00	$ 6,000.00
18	Fencing	1	LS	$ 78,000.00	$ 78,000.00
19	Drywall ceiling allowance	1	LS	$ 7,500.00	$ 7,500.00
	BASE BID A TOTAL				**$ 837,665.00**