BioMax Environmental
Environmental Consulting and Industrial Hygiene Services

August 29th, 2008

Mr. Doug Button
Deputy Director
Real Estate Services Division
707 Third Street - 8th Floor
West Sacramento, CA 95605

Post Mitigation Assessment Report
Department of General Services Board of Equalization Building
450 N. Street – 22nd Floor West and North Containment Areas
Sacramento, California

Mr. Button,

BioMax Environmental, LLC (BioMax) is pleased to provide The Department of General Services (DGS) with this letter summary report detailing BioMax's findings and recommendations pertaining to our post mitigation microbial inspection and sampling assessment services provided within the 22nd Floor Western and Northern containment areas of the Board of Equalization (BOE) building (subject building) located at 450 N Street, Sacramento, California. BioMax understands that these post mitigation microbial inspection and "clearance" sampling assessment services were contracted with BioMax, at your request, in an effort to review and verify the successful completion of microbial mitigative efforts performed by your restoration contractor, JLS Environmental, Inc., within the previously identified areas as noted within the subject building.

Therefore, these post mitigation clearance assessment services are intended to assess the current site conditions wherein mitigative activities were performed by JLS to investigate and address prior moisture and mold related damages and impacts. Procedural recommendations pertaining to BioMax's review of historical and analytical data associated with the subject area have been summarized within our report entitled 22nd Floor Procedures for Destructive Inspection and Microbial Mitigation, dated May 9th 2008. All historical reports and assessment data may also be obtained for further historical reference, as necessary.

These post mitigation microbial clearance assessment services, thereby, are intended to provide a professional evaluation supported by technical sampling data verifying physical conditions wherein the successful completion of microbial removal and decontamination within the affected areas has been achieved. Hence, following the completion of prescribed mitigative activities performed by your selected mitigation contractor, Mr. Michael A. Polkabla, CIH, REA of BioMax performed a post mitigation site inspection and sampling assessment within the affected

areas of the subject building containment areas as noted below. BioMax's findings and conclusions pertaining to our post mitigation sampling assessment are summarized herein.

SITE OBSERVATIONS

Site inspection and post mitigation assessment sampling activities were performed on Thursday, August 7th, 2008 wherein site access into contained and non-contained 22nd floor areas was facilitated by Mr. Rick Boggs of JLS. On this day, Mr. Michael A. Polkabla, CIH, REA of BioMax performed a detailed visual site inspection within each the containment system barriers associated with the Western and Northern 22nd Floor quadrant areas and collected a series of airborne samples within and surrounding these areas as noted below.

On-site inspection and clearance sampling assessment activities were performed by Mr. Michael A. Polkabla, CIH, REA, of BioMax in accordance with currently recognized microbial assessment and sampling guideline procedures. Mr. Polkabla has been certified in the Comprehensive Practice of Industrial Hygiene by the American Board of Industrial Hygiene and holds the right to the designation "Certified Industrial Hygienist" (CIH) under certification number CP 7104. Mr. Polkabla is also certified by the California Environmental Protection Agency (Cal/EPA) as a Class I Registered Environmental Assessor (REA) under Cal/EPA certification number 05011. Previously established clearance criteria developed for these activities has been formalized in BioMax's Post Mitigation Clearance Assessment Protocols dated February 15th, 2008. Such protocols have been reviewed by BOE's environmental consultant, Hygientech prior to implementation by DGS. A summary of significant notations and observations gathered during BioMax's site inspection and clearance assessment within the subject containment areas are compiled as follows:

1. At the time of our site inspection and clearance sampling assessment performed on August 7th, 2008 ambient outdoor conditions both prior to and following our interior assessment consisted of sunny and mild conditions with an outdoor temperatures range between 64 and 72 degrees F and relative humidity of 28 to 31 %. Predominant winds were noted at approximately 0-5 knots from the southwesterly direction at the time of our assessment. Interior environmental conditions within the sampled 22nd Floor areas consisted of a temperature range between 79 and 85 degrees F with relative humidity range of 27 to 28 percent.

2. The observed interior containment barrier systems whereby microbial mitigative activities were performed included the work areas primarily located along the building perimeter walls and interior offices associated with the previously identified impacted areas of the subject building. Within such areas, wall perimeter and ceiling plastic containment barriers erected by JLS were established and maintained within the impacted areas as per BioMax's protocols and noted on the "as built" construction site floor diagram documents. Such floor plan diagrams may be reviewed for further reference as supplied by the site mitigation contractor (JLS), as necessary. Based on BioMax's regular inspection and review of records and

conditions within and surrounding the noted containment areas, BioMax believes that such evidence indicates that the current protective systems have provided appropriate control barriers during the performance of the noted mitigative activity.

3. Based on our post mitigation inspection within and surrounding the containment areas, BioMax noted the absence of visible evidence of elevated residual moisture and/or microbial indicators (such as staining, delamination, etc.) within the remaining exposed interior walls, wall framing, and wall cavities following the performance of mitigative measures. Utilization of a TraMex hand-held inductive moisture meter indicated normal moisture content within all remaining walls and building materials inspected within the sampled containment areas at the time of our assessment.

4. As noted within the previously referenced historical ports, the primary affected areas of visible moisture staining damage previously identified within the western and northern quadrants of the 22nd floor primarily included moisture related surface staining along the northern and western perimeter wall areas and localized staining on ceiling tiles at these perimeter locations.

5. Containment system barriers encompassing the interior affected areas were observed and verified during multiple inspection dates under appropriate posting and negative pressure differential. Worker and equipment entry and exit chambers comprised of a series of zippered plastic access doorways were also observed attached to the noted containment barriers consistent with BioMax's previous written mitigation protocols.

6. As prescribed, all identified affected interior wallboard building materials had been removed from each of the noted areas exposing interior wall cavity framing (metal) and underlayment wallboard siding materials present within the impacted containment areas. Upon post mitigation inspection, all remaining exposed building materials associated with the interior structural and wall systems exhibited no significant staining and/or elevated mold growth following the completion of prescribed physical mold removal and chemical decontamination procedures performed by the selected mitigation contractor on the surfaces of such exposed building materials.

7. A 22nd Floor schematic record has been developed and maintained by JLS during mitigative wall removal activities indicating the specific areas where visible staining and mold like indicators have been identified within the exposed wall cavities and wall cavity underlayment materials. Such records indicating a summary of the linear extent of the impacted surface areas as well as the relative extent (density coverage) of mold-like damaged materials may be provided for review upon request.

8. In conjunction with our visual inspection, BioMax collected series airborne samples within and outside each of the containment areas noted below for subsequent comparative analysis. Such samples collected within and surrounding each the interior containment areas were performed in an effort to identify and quantify the presence of any potential significant

fugitive airborne mold spores present within (and surrounding) the containment systems following the completion of the prescribed mitigative effort.

9. BioMax also collected a series of digital images during these post mitigative inspection and sampling assessment activities to document the conditions and significant site observations gathered at this time. Such images are provided as an attachment to this summary report for further reference, as necessary.

SAMPLING PROCEDURES

On-site inspection and sampling assessment activities were conducted by Mr. Michael A. Polkabla, CIH, REA, of BioMax Environmental on August 7th, 2008. All sampling equipment, supplies, calibration materials, and collection media were provided by BioMax as part of the performance of this scope of work. Sample collection procedures and methods were performed using standard industrial hygiene sampling methods following techniques prescribed by the contracted analytical laboratory.

Spore Trap Airborne Microbial and Particulate Sampling:

The collection of airborne Spore Trap microbial samples was achieved using Zefon Air-O-Cell sampling cassette collection devices placed in each of the areas identified in the tables below. Airborne Spore Trap samples were collected within and outside each of the containment areas at a height of approximately four feet above ground level using a tripod mounted Quick Take 15 air sampling pump manufactured by SKC. Samples were collected at a calibrated flow rate of 15 liters per minute for a total of five minutes per sample. Resultant total sample volumes, therefore, corresponded to 75 liters collected for each collected sample. Field calibration of the SKC air sampling pump was conducted and recorded prior to and following sampling activities using a field rotometer devise calibrated with a Bios Drycal primary standard flow meter. All spore trap air sampling and analytical procedures were performed in accordance with prescribed manufacturer guidelines as well as applicable professional certified industrial hygiene indoor air quality microbial investigation procedures and certified industrial hygiene practices.

Additional exterior ambient samples were also similarly collected and analyzed prior to and following the collection of interior samples in an effort to identify and quantify representative background microbial taxa (types), rank order, and corresponding airborne spore levels present within the ambient environment at the time of this assessment. Sampling collection activities performed during this study included the collection of identifiable airborne microbial contaminants within the representative area locations noted below:

Table 1. 22 Airborne Spore Trap Sampling Locations:

Air Sample Number	Spore Trap Air Sampling Location
13857632	Ambient outside location (Main Entry Level)

Air Sample Number	Spore Trap Air Sampling Location
13857667	22nd Floor office N. (outside containment)
13857625	22nd Floor NW corner of Northern containment
13857641	22nd Floor middle perimeter leg of Northern containment
13857621	22nd Floor NE corner of Northern containment
13857657	22nd Floor West side (outside containment)
13857649	22nd Floor SW Corner of Western Containment (near 2219)
13857651	22nd Floor West containment at center (office 2221)
13857761	22nd Floor West containment at NW corner (2226)
13856298	Ambient outside sample from 23rd Floor west balcony

At the conclusion of sampling activities, preparation and shipping of the collected samples were accomplished in accordance with standard industrial hygiene chain of custody (COC) documentation procedures and quality assurance/quality control practices. Once collected, labeled, and recorded, all samples were double sealed within airtight plastic Ziploc shipping containers and transported via Federal Express Priority Mail to Environmental Microbial Laboratories (EMLabs) in San Bruno, California. EMLabs holds current applicable analytical accreditation and specializes in microbial analytical procedures. Sampling and chain of custody records are provided as an attachment to this letter report for further reference.

ANALYTICAL FINDINGS AND CONCLUSIONS

Airborne Spore Trap Findings:

Laboratory analytical methods for the identification and enumeration of microbial (mold) taxa and particulate contaminants were conducted in accordance with prescribed analytical procedures and quality control/assurance measures. Original laboratory results including the enumeration of recognizable microbial spore and particulate types are also attached to this letter report for further reference and detail. A summary of airborne Spore Trap microbial (mold) and particulate findings pertaining to each of the subject areas are presented in Table 2 below:

Table 2. Summary of Airborne Microbial and Particulate Findings

Location Desc.	Total Mold Spores (Cts/m3)	Background Debris (scale of 1-4)	Skin Cell Fragments (scale of 1-4)
22nd Floor office N. (outside containment)	590	2+	1+
22nd Floor NW corner of Northern containment	<13	2+	1+
22nd Floor middle perimeter leg of Northern containment	13	2+	1+
22nd Floor NE corner of Northern containment	<13	1+	1+
22nd Floor West side (outside containment)	<13	1+	1+
22nd Floor SW Corner of Western Containment (near 2219)	66	2+	1+
22nd Floor West containment at center (office 2221)	53	2+	1+
22nd Floor West containment at NW corner (2226)	<13	<1+	<1+
Ambient outside sample from 23rd Floor west balcony	13	1+	1+
22nd Floor office N. (outside containment)	690	2+	1+

The analytical findings presented in Table 2 clearly indicate the presence of significantly lower concentrations of microbial (mold) spores measured within each of the interior samples collected both within and surrounding the subject containment areas when compared to the levels currently measured within the samples collected from the corresponding ambient outside environment. Analytical findings also indicate similar fungal taxa distribution (mold types) and rank order (predominant taxa) of molds identified within the mitigated areas as well as the adjacent hallway area sampled (area noted as "Hallway" outside containment). Particularly worthy of note, was

the absence of elevated levels of hydrophilic (moisture loving) mold taxa spores following the performance of mitigative activities within the noted area.

Although there are currently no regulatory standards or limits pertaining to allowable airborne fungal concentrations (for any mold taxa) present in indoor environments, there is a general consensus among indoor air quality experts that microbial contamination found within "typical healthy" living spaces are generally similar in kind and present at levels which are similar to and/or below those levels and taxa found in the corresponding native outside environment. BioMax believes that the absence of elevated moisture, absence of visible staining resultant from moisture and/or residual mold, and relatively fewer total airborne mold levels with typical taxa and rank order distribution following mitigative clean-up activities are consistent with these generally acceptable conditions. BioMax, therefore, believes that these findings provide reasonable evidence indicating that current microbial clean-up measures have successfully mitigated and contained mold contamination within the mitigated areas and materials to normal representative levels.

BioMax also understands that parallel air sampling data and supplemental surface sample data collected by BOE's environmental consultant, Hygientech, International, Inc. (HTI) also indicated "unremarkable" levels of airborne mold spores and surface spores following the mitigative efforts performed within these noted areas.

Hence, based on these findings, BioMax believes that the current site conditions present within the mitigated areas as well as the corresponding analytical data collected and evaluated, following the performance of the recommended destructive inspection and mitigative procedures, meets the clearance criteria established for these activities as presented in BioMax's Post Mitigation Clearance Assessment Protocols dated February 15th, 2008 as reviewed and approved by BOE's environmental consultant, Hygientech. Therefore, BioMax believes that achievement of such criteria warrants our determination and recommendation that the previously impacted areas may be considered acceptable for reconstruction at this time.

Airborne Particulate Findings:

Analytical findings pertaining to the levels of airborne particulates debris identified within the collected air samples within and surrounding the previously impacted areas also provide reasonable evidence indicating that current particulate clean-up and mitigative control measures have successfully removed, controlled, and contained particulate debris within the identified containment areas to acceptable levels.

RECOMMENDATIONS

Based on the findings and conclusions presented in this report, BioMax believes that the current airborne microbial levels sampled and analyzed from within the identified 22nd Floor Western and Northern quadrant areas of the subject building provides no significant evidence of elevated residual microbial contamination or airborne contamination/migration following the completion

of prescribed microbial mitigative measures. Hence, based on our site observations, field measurements, and review of these findings at this time, BioMax believes that the previously affected areas may be considered acceptable for general reconstruction following prudent reconstruction practices. Therefore, based on these findings, BioMax recommends the implementation of the noted additional optional measures and actions discussed below:

1. BioMax believes that current airborne microbial (mold) levels and mold types have been identified within the noted containment areas at levels which are consistent with generally acceptable conditions and parameters at this time. Hence, BioMax recommends that no further airborne microbial sampling activities are warranted within the specific containment areas under the conditions of this prescribed scope of work at this time. However, due to the understood knowledge that microbial contamination, by nature, may change over time resultant from future/follow-up site activities as well as changing moisture conditions and environments, these recommendations are subject to revision in the event that such conditions and/or environments arise.

2. During the performance of interior reconstruction activities, BioMax recommends that a qualified and experienced building inspector/contractor be utilized to verify the current functional integrity of all applicable building related plumbing, perimeter flashing, sealing, and drainage systems in accordance with current building codes and construction practices. Any identified deficiencies should be appropriately documented, corrected, and then functionally verified (e.g. tested) prior to subsequent reconstruction and tenant re-occupancy/use. Certainly, the establishment/installation of any additional engineering controls (as identified through additional professional engineering consultation) should also be performed and implemented in accordance with applicable standards, building codes, and ordinances, as appropriate.

3. BioMax recommends that all reconstruction of interior structural building materials within these areas should only be undertaken utilizing high quality, visibly clean (hand selected) construction grade building materials obtained from reputable commercial sources and which are verified through visual assessment to be free from elevated microbial contamination and/or elevated moisture content. Building materials, which are notably moist and/or visibly stained, should not be used during the reconstruction undertaken within the subject building.

4. BioMax recommends that current plastic barriers (as established during this mitigation) should remain during any reconstruction activity so as to minimize the potential transmission of associated construction dust and debris throughout the subject structure. BioMax recommends (as an additional precautionary measure) that DGS considers the performance of supplemental post reconstruction detail cleaning following the completion of interior renovation and/or reconstructive activities.

5. Reasonable additional assessment and investigative measures may also be required upon the identification of new or previously undiscovered materials and/or information related to moisture/microbial impacts within the subject building structures, as necessary. Any occurrence and/or re-occurrence of moisture intrusion following routine O&M and/or general

reconstruction within the subject building should also be reviewed and addressed through additional professional consultation, as necessary. BioMax is certainly prepared to provide such professional consultation pertaining to these and any follow-up investigative measures upon request.

BioMax believes that the conclusions and recommendations outlined above are consistent with standard industry microbial mitigative practices and prudent industrial hygiene hazard control methods. Please do not hesitate to contact our offices directly at (510) 724-3100 if you have any additional questions, comments, or require further assistance regarding this matter.

Sincerely,

Michael A. Polkabla, CIH, REA
Vice President, Principal

THE AMERICAN BOARD OF INDUSTRIAL HYGIENE
INCORPORATED
CERTIFICATION NUMBER
7104 CP
EXPIRES
6-1-2013
PENNSYLVANIA - 1960
MICHAEL ANDREW POLKABLA, CIH

LIMITATIONS

Please note that the professional opinions presented in this review are intended for the sole use of the California State Department of General Services (DGS) and their designated beneficiaries. No other party should rely on the information contained herein without the prior written consent of BioMax Environmental and DGS. The professional opinions provided herein are based on BioMax's review and understanding of current site information and observed site conditions present within the areas inspected at the time these services were performed. Professional recommendations provided as part of this limited scope of work are intended for client consideration only and are not intended as a professional or regulatory mandate. Implementation of any of the above measures or recommendations does not, in any way, warrant the day-to-day health and/or safety of building occupants, residents, site workers, nor regulatory or building code compliance status during normal and changing environmental conditions. As microbial contamination, by nature, may change over time due to additional moisture intrusion, favorable growth conditions, and changing environments, the findings of this report are subject to change in the event that such conditions and/or environments arise. Also, the professional opinions expressed here are subject to revision in the event that new or previously undiscovered information is obtained or uncovered.

The information contained in this and any other applicable communication is for consideration purposes only. It is not intended, nor should it be construed as providing legal advice or warranting any level of safety or regulatory compliance. The sole purpose of such information is to assist with the anticipation, identification, evaluation and control of elevated and/or unnecessary health of physical hazards. Any action taken based on this information, including but not limited to opinions, suggestions and recommendations, whether implied or expressed, is the sole responsibility of the individual taking the action. The management of acceptable health and safety is criteria dependent and situation specific in nature, therefore requiring extensive knowledge and prudent value assessments so as to be properly determined and maintained.

These services were performed by BioMax in accordance with generally accepted professional industrial hygiene principals, practices, and standards of care. Under the existing Industrial Hygiene Definition and Registration Act, all reports, opinions or official documents prepared by a Certified Industrial Hygienist (CIH) constitutes an expression of professional opinion regarding those facts or findings which are subject of a certification and does not constitute a warranty or guarantee, either expressed or implied.

EMLab P&K

Report for:

Mr. Michael Polkabla
Biomax Environmental
775 San Pablo Ave.
Pinole, CA 94564

Regarding: Project: 080708-01
EML ID: 453014

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Spore trap analysis: 08-11-2008

Project SOPs: Spore trap analysis (I100000)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

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

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Biomax Environmental
C/O: Mr. Michael Polkabla
Re: 080708-01

Date of Sampling: 08-07-2008
Date of Receipt: 08-08-2008
Date of Report: 08-11-2008

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	13857632: Ambient garage roof top		13857667: 22nd floor office N.		13857625: 22 north containment, orange NW		13857641: 22 north cont., middle	
Comments (see below)	None		None		None		None	
Lab ID-Version‡:	1999078-1		1999079-1		1999080-1		1999081-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria								
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*	2	107						
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium	5	267						
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Other brown					1	13		
Penicillium/Aspergillus types†	4	213						
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*								
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	2+		2+		2+		1+	
Hyphal fragments/m3	< 13		< 13		< 13		< 13	
Pollen/m3	27		< 13		< 13		< 13	
Skin cells (1-4+)	1+		1+		1+		1+	
Sample volume (liters)	75		75		75		75	
TOTAL SPORE/m3		590		< 13		13		< 13

Comments:

* Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
††Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher then reported. It is important to account for samples volumes when evaluating dust levels.
The Limit of Detection is the product of a raw count of 1 and 100 divided by the percent read. The analytical sensitivity (counts/m3) is the product of the Limit of Detection and 1000 divided by the sample volume.
‡ A "Version" greater than 1 indicates amended data.

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SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	13857621: 22 north, NE corner		13857657: 22 west, outside containment		13857649: 22 west at SW corner POW 2219		13857651: 22 west at center office 2221	
Comments (see below)	None		None		None		None	
Lab ID-Version‡:	1999082-1		1999083-1		1999084-1		1999085-1	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria								
Arthrinium								
Ascospores*								
Aureobasidium								
Basidiospores*								
Bipolaris/Drechslera group								
Botrytis								
Chaetomium								
Cladosporium			1	53	1	53		
Curvularia								
Epicoccum								
Fusarium								
Myrothecium								
Nigrospora								
Other brown			1	13				
Other colorless								
Penicillium/Aspergillus types†								
Pithomyces								
Rusts*								
Smuts*, Periconia, Myxomycetes*								
Stachybotrys								
Stemphylium								
Torula								
Ulocladium								
Zygomycetes								
Background debris (1-4+)††	1+		2+		2+		< 1+	
Hyphal fragments/m3	< 13		13		< 13		< 13	
Pollen/m3	< 13		< 13		< 13		< 13	
Skin cells (1-4+)	1+		1+		1+		< 1+	
Sample volume (liters)	75		75		75		75	
TOTAL SPORE/m3		< 13		66		53		< 13

Comments:

* Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.
† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.
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Date of Sampling: 08-07-2008
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SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	13857761: 22 west at NW corner 2226		13856298: 23rd floor balcony	
Comments (see below)	None		None	
Lab ID-Version‡:	1999086-1		1999087-1	
	raw ct.	spores/m3	raw ct.	spores/m3
Alternaria				
Arthrinium				
Ascospores*			2	67
Aureobasidium				
Basidiospores*			1	53
Bipolaris/Drechslera group				
Botrytis				
Chaetomium				
Cladosporium			5	267
Curvularia				
Epicoccum			1	13
Fusarium				
Myrothecium				
Nigrospora				
Other brown	1	13		
Other colorless				
Penicillium/Aspergillus types†			1	53
Pithomyces				
Rusts*			1	13
Smuts*, Periconia, Myxomycetes*			17	227
Stachybotrys				
Stemphylium				
Torula				
Ulocladium				
Zygomycetes				
Background debris (1-4+)††	1+		2+	
Hyphal fragments/m3	< 13		< 13	
Pollen/m3	< 13		13	
Skin cells (1-4+)	1+		1+	
Sample volume (liters)	75		75	
TOTAL SPORE/m3		13		690

Comments:

* Most of these spore types are not seen with culturable methods (Andersen sampling), although some may appear as non-sporulating fungi. Most of the basidiospores are "mushroom" spores while the rusts and smuts are plant pathogens.
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MoldRANGE™: Extended Outdoor Comparison

Outdoor Location: 13857632, Ambient garage roof top

Fungi Identified	Outdoor data	Typical Outdoor Data by Date† Month: August				Typical Outdoor Data by Location‡ State: CA			
	spores/m3	low	med	high	freq %	low	med	high	freq %
Generally able to grow indoors*									
Alternaria	-	7	40	520	69	7	27	210	59
Bipolaris/Drechslera group	-	7	13	250	26	7	13	120	14
Chaetomium	-	7	13	120	15	7	13	110	19
Cladosporium	267	53	800	11,000	98	53	640	6,400	98
Curvularia	-	7	27	860	29	7	13	200	7
Nigrospora	-	7	13	240	21	7	13	170	8
Penicillium/Aspergillus types	213	30	270	3,400	89	40	210	2,500	87
Stachybotrys	-	7	13	420	4	7	13	300	5
Torula	-	7	13	160	16	7	13	150	13
Seldom found growing indoors**									
Ascospores	-	13	180	5,400	82	13	110	1,800	72
Basidiospores	107	13	350	19,000	96	13	230	6,700	94
Rusts	-	7	13	290	27	7	13	250	28
Smuts, Periconia, Myxomycetes	-	8	50	910	79	8	40	480	71
TOTAL SPORES/M3	587								

† The Typical Outdoor Data by Date represents the typical outdoor spore levels across North America for the month indicated. The last column represents the frequency of occurrence. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 2.5% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

‡ The Typical Outdoor Data by Location represents the typical outdoor spore levels for the region indicated for the entire year. As with the Typical Outdoor Data by Date, the four columns represent the frequency of occurrence and the typical low, medium, and high concentration values for the spore type indicated. These values are updated periodically, and if enough data is not available to make a statistically meaningful assessment, it is indicated with a dash.

*The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

**These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor data" are based on the results of the analysis of samples delivered to and analyzed by EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. In addition, EMLab P&K may not have received and tested a representative number of samples for every region or time period. EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the use or interpretation of the data contained in, or any actions taken or omitted in reliance upon, this report.

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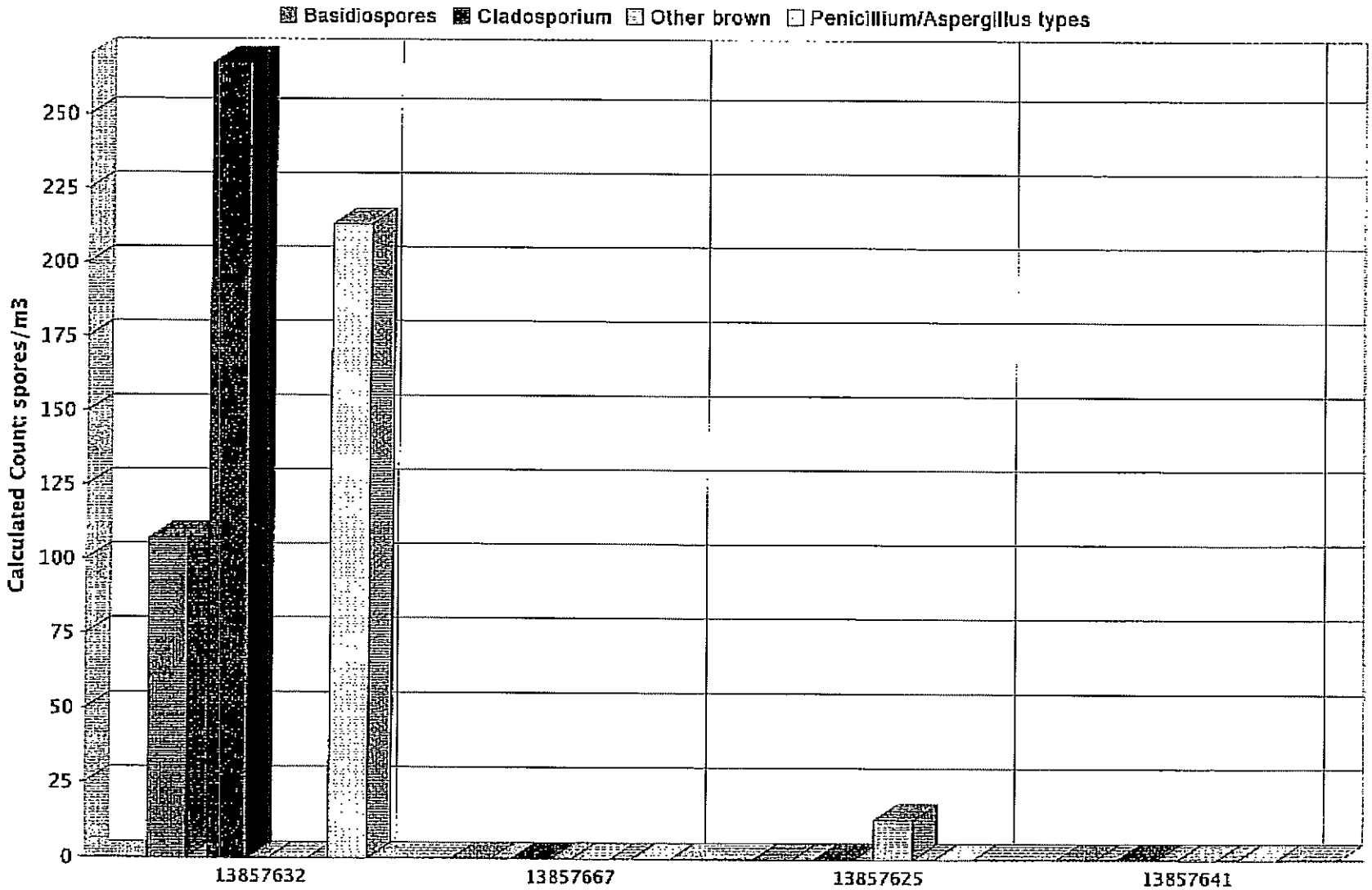
08-11-2008: 080708-01

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.com

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY



Comments:

Note: Graphical output may understate the importance of certain "marker" genera.

08-11-2008: 080708-01

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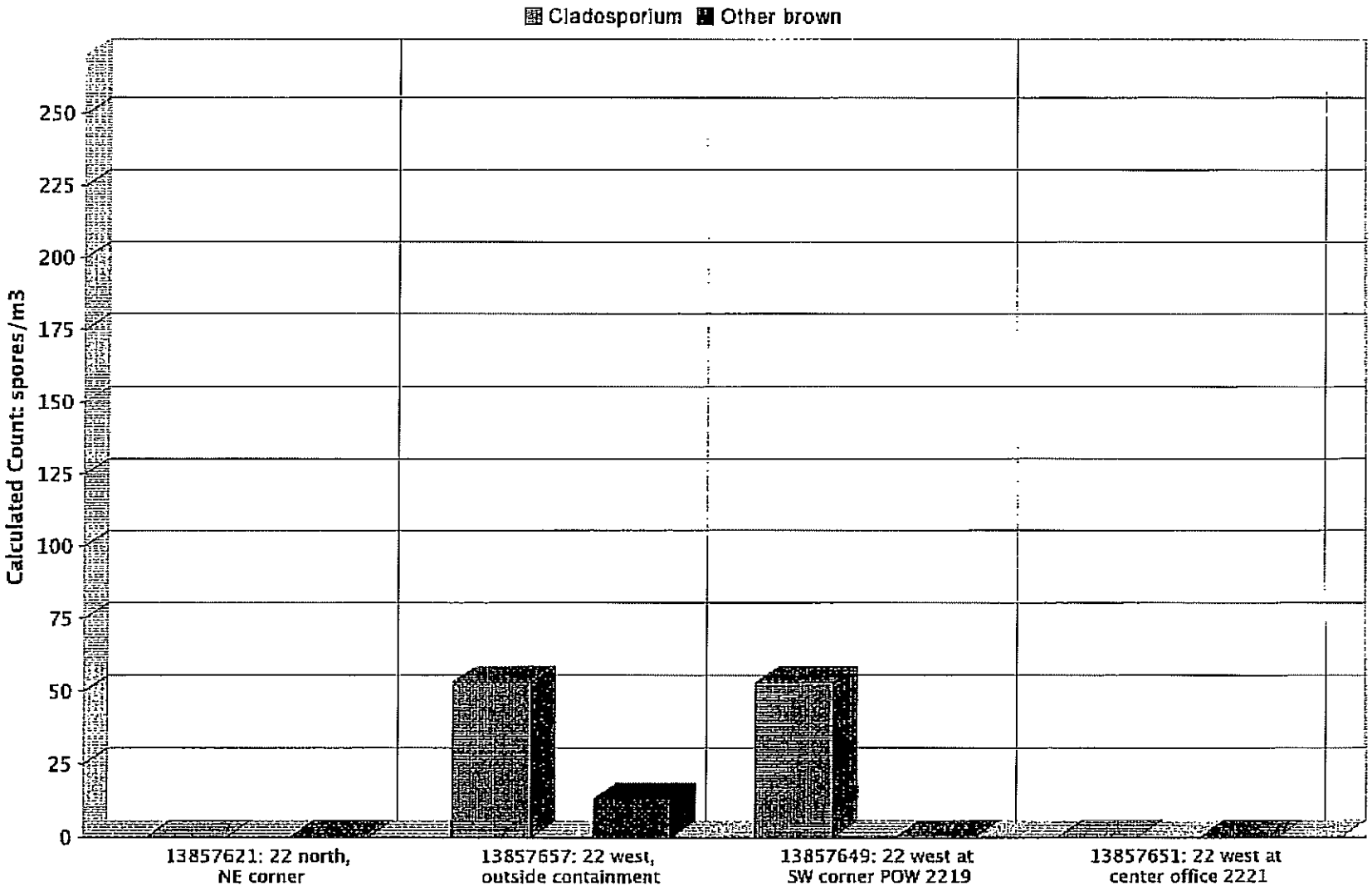

Comments:

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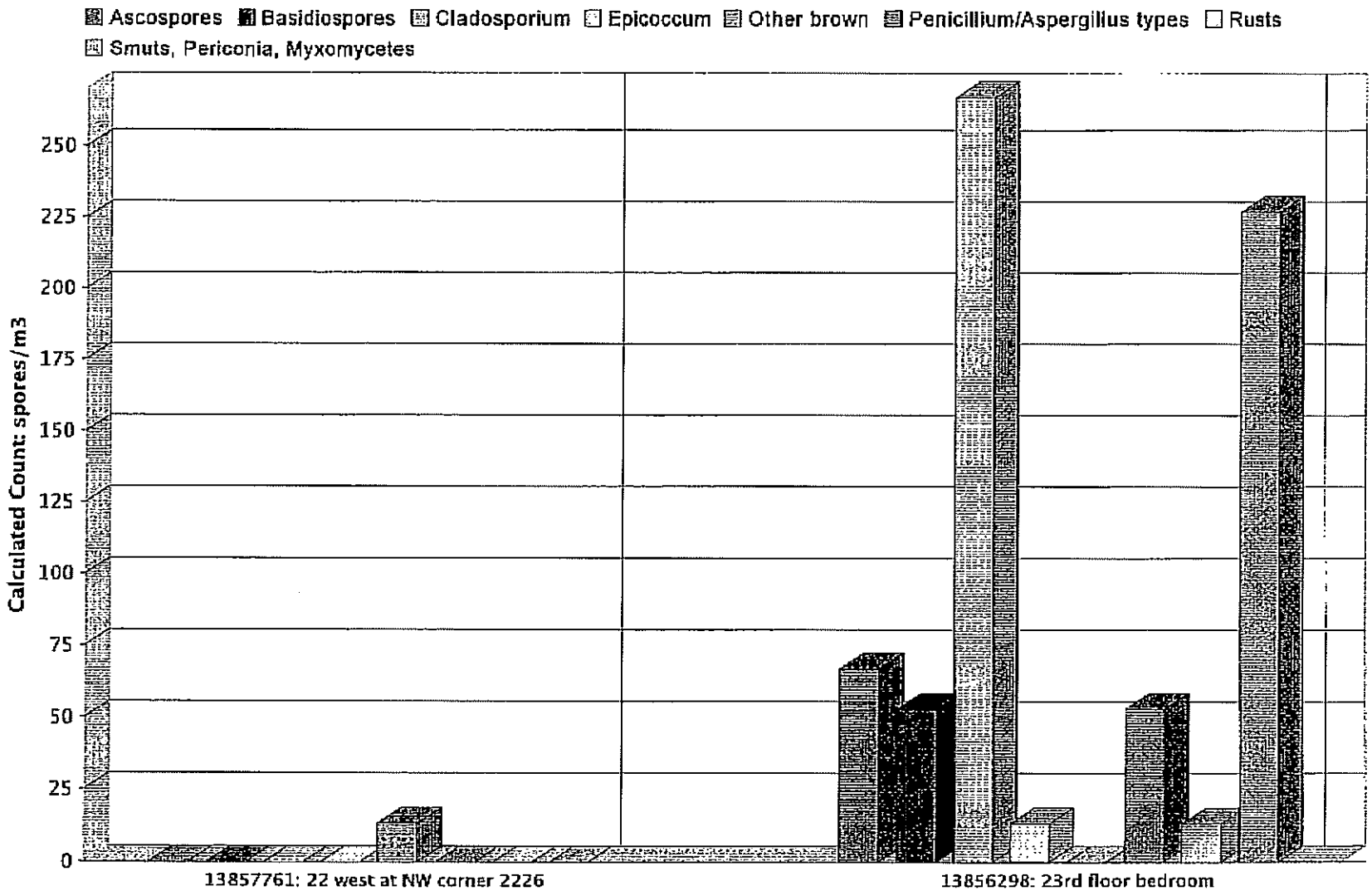


Comments:

Note: Graphical output may understate the importance of certain "marker" genera.

MICROBIAL SPORE TRAP AIR SAMPLING RECORD

000453014

Page 1 of 1

BioMax Environmental
775 San Pablo Ave.
Pinole, CA 94564

www.biomaxenvironmental.com

Phone: (510) 724-3100
Fax: (510) 724-3145
biomaxenv@aol.com

Location: 450 N. Street Sacramento, CA

Client: D&S

Project #: 080708-01

Date: 8/7/08

Laboratory: EMLabs

Collected by: M. A. Polkabla, CIH

Req. Turn Around: 24 HR

Signature:

Analysis: Fungal Particulate ID with Quantification.

Sample Number	Time	Location/Type	Temp/RH
13857632	0845	Ambient Garage Rooftop	64°/31%
13857667	0900	22nd Floor office N. (outside containment)	79°/27%
13857625	0915	22 North Containment (orange) NW	79°/27%
13857641	0925	22 North Cont. (middle)	82°/27%
13857621	0935	22 North (NE Corner)	85°/27%
13857657	0945	22 West (outside containment)	79°/28%
13857649	0958	22 West @ SW Corner POW 2219	81°/28%
13857651	1015	22 West @ center office 2221	82°/27%
13857761	1025	22 West @ NW corner 2226	81°/27%
13857298	1040	23rd Floor Balcony	72°/28%

Total Sample Time (min):	Flow Rate (l/min):	Total Sample Volume (liters):	Ambient Conditions:	Comments:
5	15	75	Cool / Clear 10-15 SW	

Please sign this form below acknowledging sample receipt and return executed form with laboratory reports. Fax, send, e-mail results to BioMax Environmental at (510) 724-3145 biomaxenv@aol.com

Other Instructions: _____

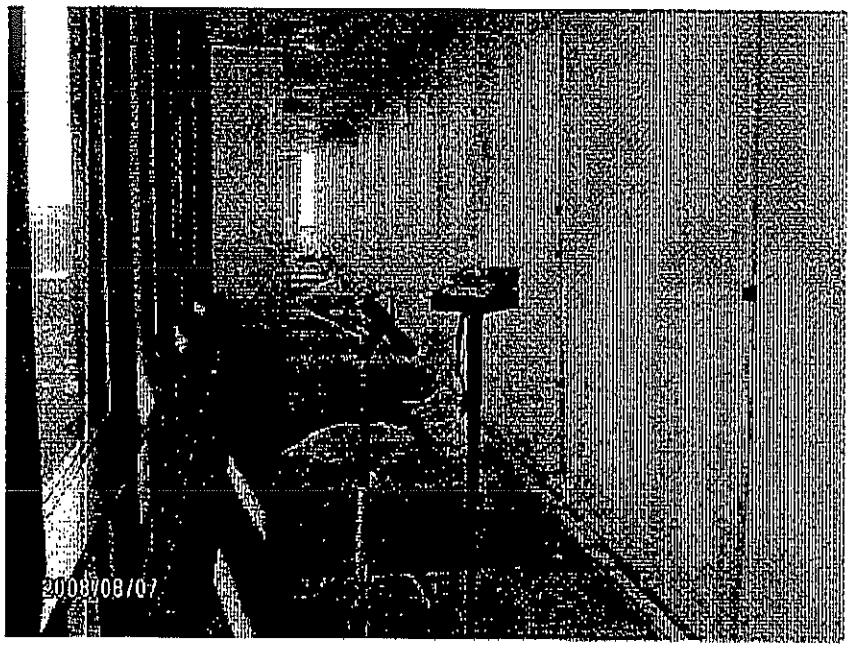
Relinquished by:	*Received By:* Ann Morrissey
Method of Transportation: Fed Ex	
Time/Date Sent: 4:00 on 8/7/08	*Time/Date Received:* 8-8-08 9:30

Attachment A: Digital Images
August 7th, 2008
BOE Building 22nd Floor North and West Containment Areas
Sacramento, CA

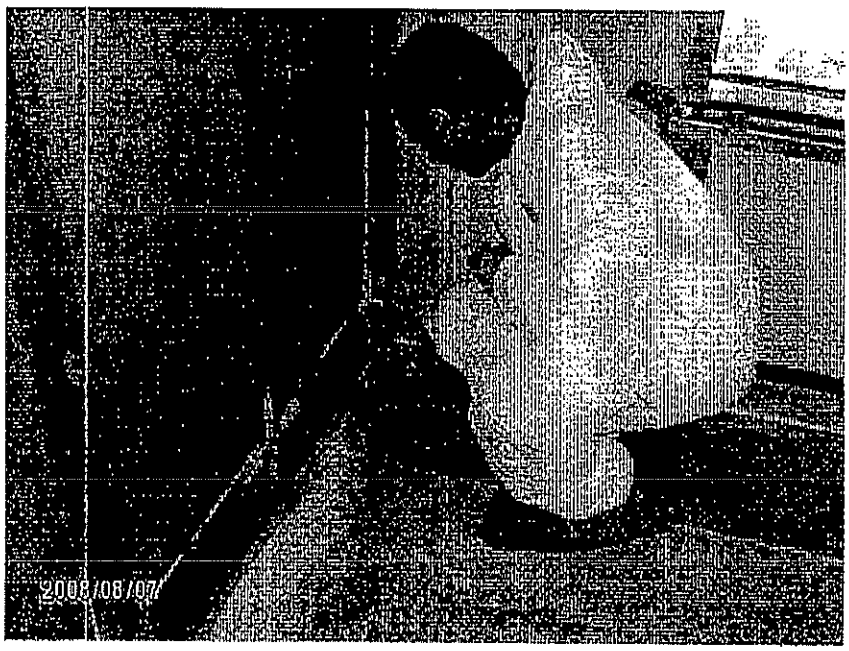
Click here for color photos

1) Image of air sampling location (outside of containment) adjacent to occupied construction work space prior to containment sampling at time of assessment.

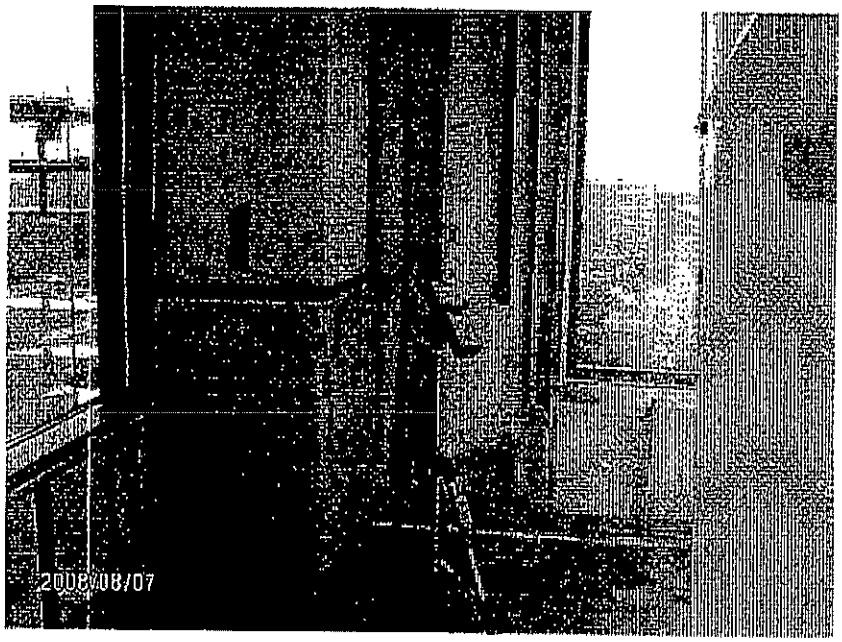
2) Image of air sampling location within 22nd Floor northern containment at BOE Building (Subject Building) located at 450 N Street, Sacramento, California at time of assessment.



3) Image of ambient air sampling performed within middle of the northern segment of 22nd Floor within the subject building.

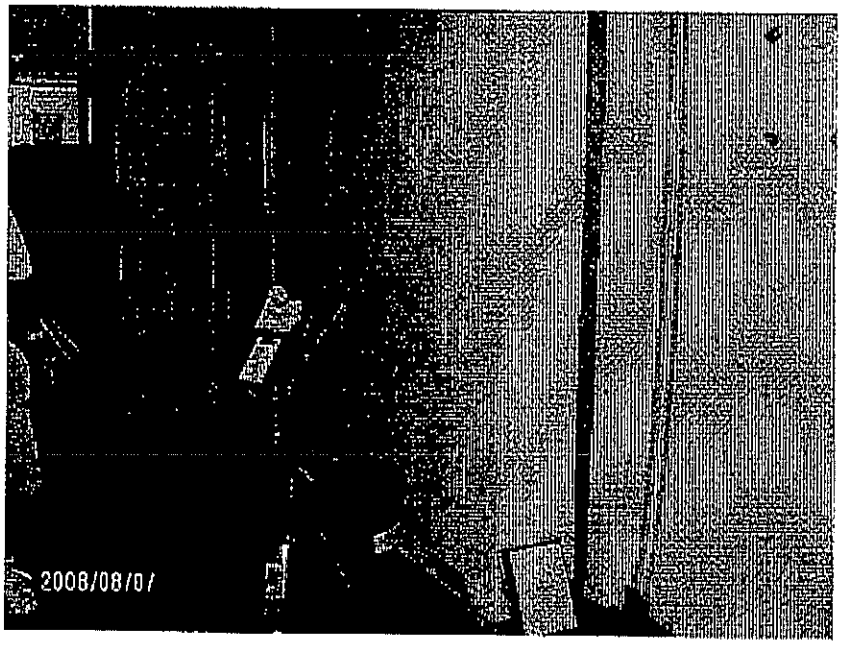


4) Image of HTI technician (Makka) collecting surface sample within 22nd Floor northern containment area at time of assessment.

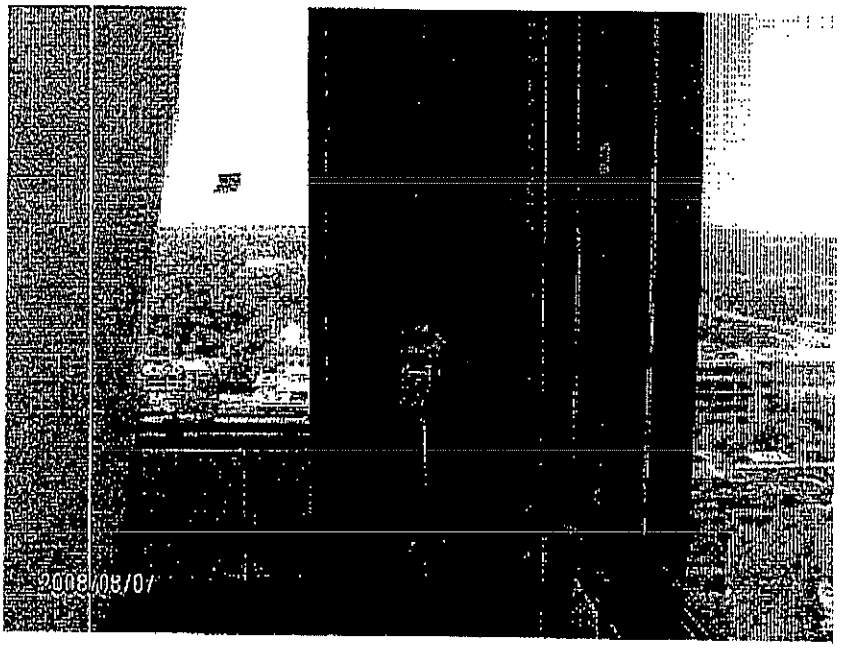


5) Image of air sampling location within 22nd Floor Northern containment area at northwestern corner of building.

6) Image of HTI technician collecting surface sample at window framing material within Northern containment area at time of assessment.



7) Image of air sampling equipment and location outside western containment area of 22nd Floor at time of assessment.

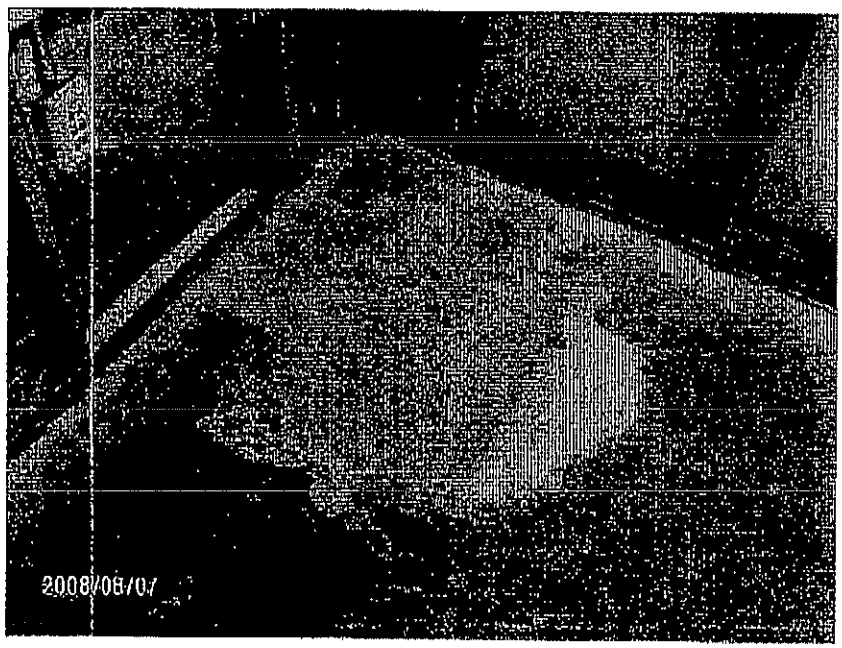


8) Image of air sampling apparatus utilized at perimeter corner wall within 22nd Floor western containment area at time of assessment.

9) Image of air sampling performed within office working space (2219) within western containment area.

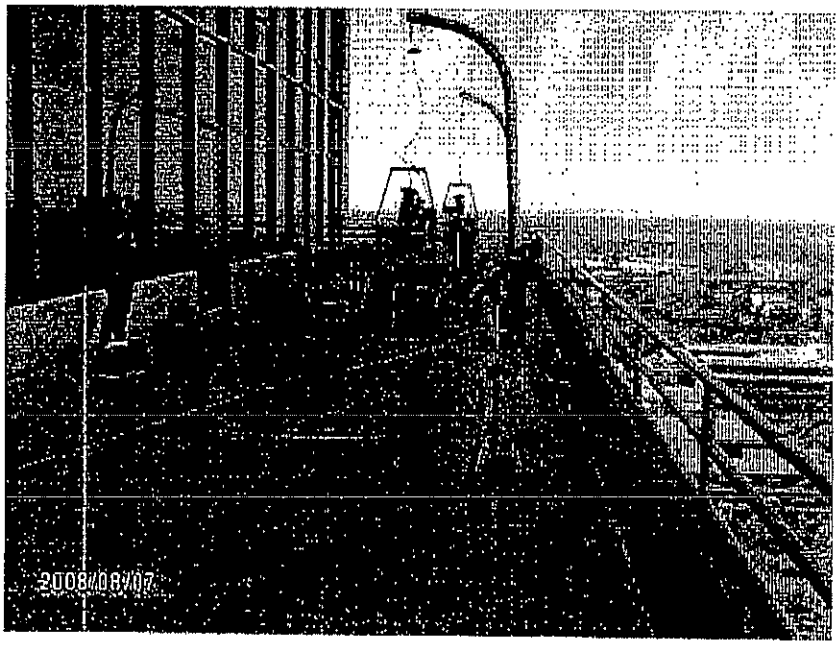
10) Image of subflooring slab material with presence of filler material and some glue staining within southwestern corner area. Area adjacent to previously mold stained wall material.

11) Additional image of representative floor filler material used within western segment of containment area at time of assessment. Some area with glue on surface and some without.

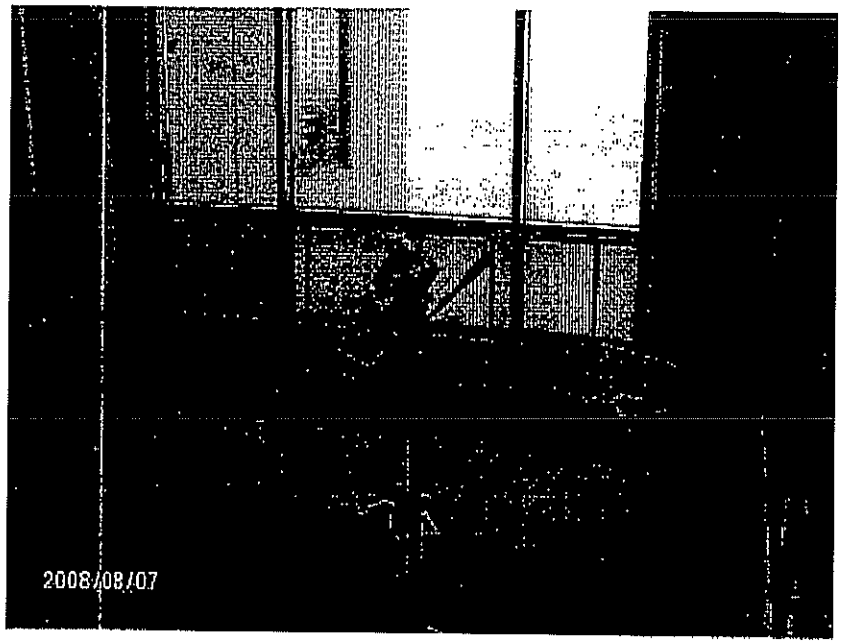


12) Additional image of floor filler material within western containment area.

13) Image of air sampling equipment within 22nd Floor western containment area (Room 2221) at time of assessment.



14) Image of ambient air sampling equipment location on 23rd Floor northern balcony at time of assessment.



15) Image of air sampling equipment present within 22nd floor northern containment at northwestern punch out window area.