



**Astex Environmental Services, Inc.**  
123 Catalpa · San Antonio, TX 78209  
Phone: (210) 828-9800 · Fax: (210) 829-4927

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May 28, 2008

Mr. Lucas Oliva  
Design Manager Real Estate Services  
San Antonio Housing Authority  
818 S. Flores  
San Antonio, Texas 78204  
Phone: (210) 477-6004  
Email: lucas\_oliva@saha.org

RE: Mold Clearance Sampling, 618 Villa Linda, San Antonio, Texas  
Astex Project #AES-08-J-4850

Dear Mr. Oliva,

Pursuant to your request, Mr. Ron Greenberg of Astex Environmental Services, Inc. (AES), Texas Department of State Health Services (TDSHS) Mold Assessment Consultant MAC 0509 conducted a Mold Clearance Inspection within the residence located at 618 Villa Linda, San Antonio, Texas to investigate the microbial conditions within the home after mold abatement activities.

It should be noted that Astex inspected four residences within the same block and three outside comparison/control samples were taken in the middle of the Villa Linda cul-de-sac; rear of 619 Villa Linda and on the corner of Villa Linda and Villa Rosa and all three samples are shown on all reports since they are being used as control levels for all four properties.

***Scope of Work***

The scope of work for this mold clearance inspection included the collection of the following samples:

- Air samples (Allergenco brand cassettes) were collected in the following locations for the analysis of Total Bioaerosols:

1. inside – containment master bedroom - 1 sample
2. inside – containment hallway - 1 sample
3. inside – living room outside containment – 1 sample
4. outside - comparison/control samples - 3 sample

Note: These samples were delivered to the contract lab, Crisp Analytical Laboratories, 2081 Hutton Dr, Suite 301, Carrollton, Texas, for analyses in accordance with the American Industrial Hygiene Association (AIHA) Environmental Microbiology Laboratory Accreditation Program (EMLAP) as well as following the Food and Drug Administration (FDA) Good Laboratory Practice Guidelines.

### ***Visual and Moisture Inspection Results***

The containment area was observed to be visually clean and free of mold and/or evidence of new or additional water intrusion. Additionally there were no indications of moisture within the wall materials and windowsills were inspected and no signs of water staining were noted.

### ***Temperature and Humidity Levels***

Temperature readings within the house ranged from 72.6 to 75.7 degrees Fahrenheit and humidity was noted to be between 36.1 to 40.3 percent

### ***Analytical Results***

The Allergenco Air Samples were collected by Astex personnel on the morning of April 25, 2008 and were delivered to the contract lab for analysis of total bioaerosols with the results being made a part of this report. The data generated in this report is based on the samples and accompanying information provided and represents concentrations at a point in time under the conditions sampled. Keep in mind, sample values fluctuate widely and single point-in-time samples can be highly variable.

Currently, there are no government regulations or widely accepted guidelines regarding exposure limits for fungi (Time Weighted Averages, Recommended Exposure Levels, etc.) and very little data has been published on the “safe” or “normal” levels of indoor spore levels, and individuals react differently to specific spore types/levels. The generally accepted Indoor Air Quality (IAQ) industry method of interpreting analytical results is based on a comparison of the type (genus/species) and quantity of fungal spores identified within the suspect areas (inside) verses the control (i.e. no history of contamination) samples and/or outside levels.

During this limited investigation, the following observations were noted:

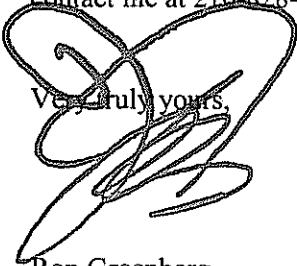
- Indoor air in general had very low levels of total fungal spores (192 to 576 count/M<sup>3</sup>) compared to outdoor air (1,296 to 1,968 count/M<sup>3</sup>) and the distribution of spores was typical of the outdoor air with *Cladosporium* being the dominant type. Only low levels of *Aspergillus/Penicillium*-like spores (192 count/M<sup>3</sup>) were detected in the living room outside of the containment and although the containment met the established clearance criteria and was deemed clean, Alamo 1 was ordered to remove the containment but continue air scrubbing within the entire residence for an additional 48 hours.

***Conclusions/Recommendations***

Since the total spore counts were well below the outside samples and the fact that no *Aspergillus/Penicillium*-like spores or *Stachybotrys* spores were detected inside containment, it was determined that the sampling event met the established clearance criteria and the space was deemed clean and safe for re-occupancy for occupants or tradesmen conducting renovation activities.

Previous or future changes in mold concentrations cannot be inferred from these sample results. Please contact me at 210-828-9800 with any questions.

Very truly yours,



Ron Greenberg  
Texas Department of State Health Services (TDSHS)  
Mold Assessment Consultant No. MAC 0509

Attachments:           Chain of Custody  
                                  Laboratory Results

**Crisp Analytical Labs, L.L.C. / C.A. Labs, L.L.C. / Crisp Analytical Labs at Houston, L.L.C.**

Client: Astex Inc. Allergenic Particle Report CA Lab Project #: CAL08042917 Date: 04/28/08  
 Address: 123 Catalpa San Antonio, TX 7820 Analysis: Light Microscopy identification of pollen/fungal spore per CA Labs Air-o-cell method  
 Attn: Ron Greenberg Sample media : Air-o-cell / Cyclex D (airborne ) Project name: SAHA Villa Linda Outside Samples page #1

Sample # Location Volume	VLIN-01 Outside By 619 Front 75		VLIN-02 Outside By 619 Rear 75		VLIN-03 Outside Villa Rosa Corner 75		Total Cnts.	Total Cnts./ m3	Per- cent
	Cnts./ m3	Per- cent	Cnts./ m3	Per- cent	Cnts./ m3	Per- cent			
Alternaria									
Ascomycetes	14	192	18	240	4	48	32	432	33.3
Basidiomycetes	32	432	32	432	32	432	96	1296	100
Botrytis									
Chaetomium					4	48	4	48	3.7
Cladosporium	97	1,296	65	864	58	768	220	2928	23.3
Curvularia	4	48	2.4						
Dreschlera/Bipolaris					11	144	11	144	11.1
Epicoccum									
Oidium/Pero									
Nigrospora			4	48	2.8		4	48	3.7
Penicillium/Asp									
Periconia/Myx									
Phthomyces									
Pseudo/Cercospora									
Rust									
Smut									
Stachybotrys									
Pollen	4	48	4	48	4	48	12	144	11.1
Hyphae	4	48	4	48	4	48	12	144	11.1
Particulate	4	48			4	48	8	96	7.4
	148	1,868	130	1,728	97	1,296	375	4,896	38.6
Total	Cnts./ m3	Per- cent	Cnts./ m3	Per- cent	Cnts./ m3	Per- cent	Total Cnts.	Total Cnts./ m3	Per- cent

Crisp Analytical Labs, L.L.C. 2081 Hutton, Suite 301 Carrollton, TX 75006  
 Dallas Baton Rouge Houston

Analyst - Leslie Crisp  
 Technical Manager - Chad Lytle

**INDOOR AIR QUALITY  
ALLERGENIC PARTICLE  
LABORATORY ANALYSIS REPORT**

Astex Inc.  
123 Catalpa  
San Antonio, TX 78209  
phone: 210-828-9800  
fax: 210-829-4927  
reference number: CAL08042917

PO #:  
Turnaround Time: 24 Hours  
Received: 04/28/08 8:30 am

**LABORATORY ANALYSIS METHOD:**

Summary of light microscopy analysis of allergenic particles in tape or air cassettes. Tape lift samples indicate presence or absence and identification of known allergenic particles. Air cassettes can be quantified in airborne concentrations (total counts/m3). Pollen and fungus type qualifications are based on keys and reference standards for known allergenic types. Sample analysis is performed by professionally trained individuals. This test report relates only to items tested. This report does not imply endorsement by any US Government agency. This report may not be reproduced except in full, without written permission from CA Labs. CA Labs - Dallas is accredited by AIHA for viable fungi analysis.

These results are submitted pursuant to CA Labs' current terms and condition of sale, including the company's standard warranty and limitation of liability provisions and no responsibility or liability is assumed for the manner in which the results are used or interpreted. If there are concerns about health aspects of known allergens, consult a physician. Pollen and spore types identified are all naturally occurring and may grow anywhere in a natural environment where water is present. While it is normal for fungi to be present inside buildings from outside sources, growth occurs in humid conditions. Fungi cannot spread from building to building, as it is always present, but may not be growing. To control allergens in an area, drying and use of HEPA filters are recommended. Bias is present in all types of spore trap cassettes by particle size, capture, spread and counting procedure used. Quantification is susceptible to variance of 100% and standard deviation to 200%. Unless notified in writing to return samples covered by this report, CA Labs will store the samples for thirty (30) days before discarding. A shipping and handling fee may be assessed for the return of any samples. This method is not covered by the scope of NVLAP or AIHA accreditation.

Analysis performed at Crisp Analytical Labs, L.L.C. 2081 Hutton Dr. Suite 301  
Carrollton, TX 75006; phone (972)488-1414, fax (972)488-8006, after-hours  
mobile (214)564-8366.

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(we will advise you to destroy or return this document.)

**Crisp Analytical Labs, L.L.C. / C.A. Labs, L.L.C. / Crisp Analytical Labs at Houston, L.L.C.**

Client: Astex Inc. Allergenic Particle Report CA Lab Project #: CAL08042914 Date: 04/28/08  
 Address: 123 Catalpa San Antonio, TX 7820 Analysis: Light Microscopy identification of pollen/fungal spore per CA Labs Air-o-cell method Project name: 618 Villa Linda AES-08-J-4850 page #1  
 Attn: Ron Greenberg Sample media : Air-o-cell / Cyclex D (airborne )

Sample # Location Volume	4850-11 Inside -Contain M. BR 75		4850-12 Inside Contain Hall 75		4850-13 Inside Out Contain Liv Rm. 75		Total Cnts./ m3	Per- cent	Total Cnts./ m3	Per- cent
	Total Cnts./ m3	Per- cent	Total Cnts./ m3	Per- cent	Total Cnts./ m3	Per- cent				
Alternaria					4	48	4	8.3		
Ascomycetes	7	96	4	48	4	48	4	8.3		
Basidiomycetes										
Botrytis										
Chaetomium	4	48								
Cladosporium			7	96	18	240	4	41.7		
Curvularia										
Dreschlera/Bipolaris										
Epicoccum										
Oidium/Pero										
Nigrospora										
Penicillium/Asp										
Periconia/Myx	4	48	7	96	4	48	4	8.3		
Pithomyces										
Pseudo/Cercospora										
Rust										
Smut										
Stachybotrys										
Skin Cells	4	48	4	48	4	48	4	8.3		
Hyphae	4	48	4	48						
Particulate			4	48						
	14	192	18	240	43	576	43	8.3		
	Total Cnts./ m3	Per- cent	Total Cnts./ m3	Per- cent	Total Cnts./ m3	Per- cent	Total Cnts./ m3	Per- cent	Total Cnts./ m3	Per- cent

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 Baton Rouge Houston  
 Analyst - Leslie Crisp Technical Manager - Chad Lytle

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