



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

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March 10, 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: Limited Mold Inspection, 602 Villa Linda, San Antonio, Texas  
Astex Project #AES-08-J-4752

Dear Mr. Oliva,

Pursuant to your request, on March 5, 2008, Mr. Ron Greenberg of Astex Environmental Services, Inc. (AES), Texas Department of State Health Services (TDSHS) Mold Assessment Consultant MAC 0509 conducted a Limited Mold Inspection within the unoccupied home at 602 Villa Linda, San Antonio, Texas to investigate the general microbial conditions in the home prior to sale.

It should be noted that Astex inspected five residences within the same block and the three outside comparison/control samples were taken in the middle of the cul-de-sac; rear of 602 Villa Linda and on the corner of Villa Linda and Villa Rosa and all three samples are shown on all five reports since they are being used as control levels for all five properties.

***Scope of Work***

The scope of work for this limited 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 – at the return air intake - 1 sample
2. inside – hallway between bedrooms - 1 sample
3. inside – master bedroom – 1 sample
4. kitchen/laundry – 1 sample
5. outside comparison/control samples - 3 samples (see note above)

Note: These samples were delivered to the contract lab, Crisp Analytical Laboratories, LLC, 2081 Hutton Dr., Carrollton, Texas 75006, 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***

No visible mold and/or evidence of water intrusion were observed within the house or garage and no indications of moisture within the wall materials was noted.

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

Temperature readings within the house were from 63.8 to 66.5 degrees Fahrenheit and humidity was noted to be between 37.8 to 39.6 percent

### ***Analytical Results***

The Allergenco Air Samples were collected by Astex personnel on the morning of March 5, 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 regulations, federal or state, establishing action limits for mold spores and mold particulates in indoor air. Also, there are no species of molds identified to be hazards to public health. Current practice is to compare interior to exterior samples, noting the species present and the contrasting levels of spores and particle.

During this limited investigation, the following observations were noted:

#### **Fungal Spores (Allergenco):**

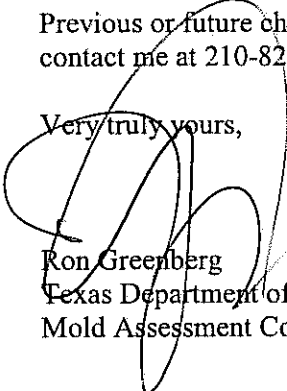
- The indoor air reported elevated levels of total fungal spores (2,832 to 6,096 count/M<sup>3</sup>) compared to outdoor air (2,592 to 3,888 count/M<sup>3</sup>) and the distribution of spores was typical of the outdoor air with *Cladosporium* being the dominant type. Low to moderate levels of *Aspergillus/ Penicillium*-like spores were detected inside (288 to 2,640 count/M<sup>3</sup>) versus none (0) reported in the outside control samples. The *Aspergillus/Penicillium*-like spores were detected in the samples taken at the HVAC return air, inside the master bedroom and in the kitchen.

***Conclusions/Recommendations***

- Since there were elevated levels of *Aspergillus/ Penicillium*-like spores detected inside, this residence should be scheduled for cleaning by a mold abatement company. Air scrubbers should be placed in the hallway between the bedrooms and in and around the kitchen, at a minimum these areas should HEPA vacuumed and sanitized.

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

**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: CAL08031507

PO #:  
Turnaround Time: 24 Hours  
Received: 3/6/08 8:30am

**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/m<sup>3</sup>). 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 fo 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.

This report is intended for the recipient, only. Please notify us if you have received this document in error  
(we will advise you to destroy or return this document.)

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.

**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  
 Address: 123 Catalpa San Antonio, TX 78209 Analysis: Light Microscopy identification of pollen/fungal spore per CA Labs Air-o-cell method  
 Attn: Ron Greenberg Sample media : Air-o-cell / Cycllex D (airborne )

CA Lab Project #: CAL08031507 Date: 3/6/08 EK  
 Project name: 602 Villa Linda / AES-08-J-4752 page # 1

Sample # Location Volume	4752-15 Inside Return 75		4752-16 Inside Hall 75		4752-17 Inside M Bedroom 75		4752-18 Inside Kitchen 75		Total Cnts./ m3	Per- cent	Total Cnts./ m3	Per- cent
	Cnts./ m3	Per- cent	Total Cnts.	Per- cent	Total Cnts.	Per- cent	Total Cnts.	Per- cent				
Alternaria	14	192	5.9	7	96	3.4	4	48	0.8	11	144	2.8
Ascomycetes	4	48	1.5	4	48	1.7	4	48	0.8	11	144	2.8
Basidiomycetes	4	48	1.5				4	48	0.8			
Botrytis												
Chaetomium												
Cladosporium	187	2,496	76.5	191	2,544	89.8	245	3,264	53.5	234	3,120	60.2
Curvularia	4	48	1.5					4	48	4	48	0.9
Drechslera/Bipolaris				4	48	1.7						
Epicoccum				4	48	1.7				7	96	1.9
Oidium/Pero												
Nigrospora	7	96	2.9	4	48	1.7	4	48	0.8	4	48	0.9
Penicillium/Asp	22	288	8.8				198	2,640	43.3	119	1,584	30.6
Periconia/Myx												
Pithomyces	4	48	1.5									
Pseudo/Cercospora												
Rust												
Smut												
Stachybotrys												
Pollen												
Hyphae	4	48		4	48		4	48		4	48	
Particulate	4	48		4	48		4	48		4	48	
	245	3,264		212	2,932		457	6,096		389	5,184	
	Total Cnts./ m3	Per- cent	Total Cnts.	Per- cent	Total Cnts.	Per- cent	Total Cnts.	Per- cent	Total Cnts.	Per- cent	Total Cnts.	Per- cent

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

Analyst - Chad Lytle  
 General Manager - Leslie Crisp