



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

April 25, 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, 315 Villa Rosa, San Antonio, Texas
Astex Project #AES-08-J-4835

Dear Mr. Oliva,

Pursuant to your request, on April 22, 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 315 Villa Rosa, San Antonio, Texas to investigate the general microbial conditions in the home prior to sale.

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. outside comparison/control samples - 2 samples

- Surface (tape) sample:
 1. windowsill right rear corner bedroom - 1 sample

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

A “bead” of visible mold was observed on most of the windowsills within the residence and is believed to be from normal condensate. No other 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 81.3 to 84.0 degrees Fahrenheit and humidity was noted to be between 51.0 to 55.7 percent

Analytical Results

The Allergenco Air Samples were collected by Astex personnel on the morning of April 22, 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:

- Although the indoor air in general had acceptable levels of total fungal spores (6,576 to 7,584 count/M³) compared to outdoor air (3,360 to 10,176 count/M³) and the distribution of spores was typical of the outdoor air with *Cladosporium* being the dominant type, elevated levels, significantly higher than those outdoors, of *Alternaria*; *Curvularia*; *Dreschlera/Bipolaris*; *Nigrospora*; *Aspergillus/Penicillium*-like spores and *Periconia/Myx* were reported.
- The tape sample taken on the surface of the windowsill in the rear right bedroom identified high levels of *Alternaria*.

Conclusions/Recommendations

- Although the indoor air generally had acceptable levels of total fungal spores, the fact that there were elevated levels of species not represented in the outdoor samples on the day of the investigation, indicates that at least **select areas of the residence should be scheduled for cleaning by a mold abatement company. Air scrubbers should be placed in the Master Bedroom and in close proximity of the HVAC return and hallway between the bedrooms and all areas of the residence should HEPA vacuumed and sanitized.**
- The visible mold on the windowsills, although somewhat normal for this type of component, should be scrubbed clean 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

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 #: CAL08042832 Date:04/23/08
 Address: 123 Catalpa Project name: 315 Villa Rosa AES-08-J-4835
 San Antonio, TX 7820 Analysis: Light Microscopy identificaton of pollen/fungal spore per CA Labs Air-o-cell method page #1
 Attn: Ron Greenberg Sample media : Air-o-cell / Cyclex D (airborne)

Sample #	4835-01			4835-02			4835-11			4835-12			4835-13					
	Outside Front			Outside Rear			Inside HVAC Return			Inside Hall BR1/BR2			Inside M. Bedroom					
Volume	75			75			75			75			75					
Alternaria				14	192	1.9	22	288	3.8	14	192	2.6	25	336	5.1			
Ascomycetes	32	432	12.9	25	336	3.3	18	240	3.2	25	336	4.5	18	240	3.6			
Basidiomycetes	14	192	5.7	32	432	4.2	7	96	1.3	11	144	1.9	14	192	2.9			
Botrytis																		
Chaetomium																		
Cladosporium	205	2,736	81.4	655	8,736	85.8	425	5,664	74.7	418	5,568	74.8	346	4,608	70.1			
Curvularia				4	48	0.5	7	96	1.3	11	144	1.9	11	144	2.2			
Dreschslera/Bipolaris							14	192	2.5	7	96	1.3	4	48	0.7			
Epicoccum				18	240	2.4	18	240	3.2	14	192	2.6	14	192	2.9			
Oidium/Pero																		
Nigrospora							25	336	4.4	22	288	3.9	11	144	2.2			
Penicillium/Asp													25	336	5.1			
Periconia/Myx				11	144	1.4	32	432	5.7	32	432	5.8	25	336	5.1			
Pithomyces										4	48	0.6						
Pseudo/Cercospora																		
Rust																		
Spegazzinia				4	48	0.5												
Stachybotrys																		
Pollen	22	288		18	240		14	192		7	96		11	144				
Hyphae	7	96		4	48		11	144		7	96		7	96				
Particulate	4	48		4	48		4	48		4	48		4	48				
	252	3,360		763	10,176		569	7,584		558	7,440		493	6,576				
	Total	Cnts./	Per-	Total	Cnts./	Per-	Total	Cnts./	Per-	Total	Cnts./	Per-	Total	Cnts./	Per-	Total	Cnts./	Per-
	Cnts.	m3	cent	Cnts.	m3	cent	Cnts.	m3	cent	Cnts.	m3	cent	Cnts.	m3	cent	Cnts.	m3	cent

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

Analyst - Chad Lytle

General Manager - Leslie Crisp

**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: CAL08042832

PO #:

Turnaround Time: 24 Hours

Received: 04/23/08 9:00 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.

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.

CA Labs

Crisp Analytical Laboratories, LLC.
 2081 Hutton Dr
 Suite 301
 Carrollton, TX 75005

Phone: 972-488-1414
 Fax: 972-488-8006
 After hours Mobile: 469-233-5282

Client Name: <u>ASTEX INC</u>	CA Labs job # <u>CAL</u>
-------------------------------	--------------------------

Client Address: <u>123 CATALPA</u>	Billing Address: <u>SAME</u>
<u>SAN ANTONIO TX 78209</u>	(if different)

phone number: <u>(210) 828 9800</u>	Project Name: <u>315 VILLA ROSA</u>
fax number: <u>(210) 829 4927</u>	Project Number: <u>AES-OS-1-4831</u>

EMAIL ~~Send~~ Reports to: RONG@ASTEXINC.COM

Sample Number:	Sample Location:	Sample Date/Time:	Sample Volume (L)
4831-01	OUTSIDE FRONT	4/21/08 3:00P	0.75 L
-02	REAR		
-I1	INSIDE HUAC RETURN		
-I2	HALL BR1/BR2		
-I3	IN BEDROOM		
T1	WINDOWS IN BR		TAPE

24 HRS

CA/08 042832

45544
45548

For Internal use:

Any Initial changes regarding project (indicate yes by checking line)

Custody Information:

Samples relinquished:

Samples received:

[Signature]
Signature / Date / Time

SA 4/23/08
Signature / Date / Time

Samples relinquished:

Samples received:

Signature / Date / Time

9/1/08
Signature / Date / Time

Nonviable Bulk sample, Swab and Tape Lift Report

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 the document.)

Client Information:
Astex, Inc.
123 Catalpa
San Antonio, TX 78209

Client Project:
315 Villa Rosa
AES-08-J-4835

CA Labs Project #:
CAL08042833

Date: 04/23/08 SR

Phone: 210-828-9800

Turnaround Time: 24 Hours

Samples Received:
04/23/08 9:00 am

Fax: 210-829-4927

Attn: Ron Greenberg

Purchase Order #:

Sample#	Location	Fungal Spore Genus	Subjective Concentration (low, medium, high)
T-1	Windows M. BR	Alternaria Cladosporium	High Low

Analysis Method: Light Microscopy identification of fungal spore types utilizing keys and refractive references of known allergenic spores per CA Labs nonviable bulk, swab and tape method. Results are qualitative and spore identification is at the genus level. This method is not covered by the scope of NVLAP or AIHA accreditation. Preparation Method: Bulk, swab and tape lift directly mounted on a microscope slide and examined under an actual magnification of 1250X. Reporting: Qualitative results are determined as follows: High = Spores on 80% or more fields. Medium = Spores on 30% to 79% of fields. Low = Spores on less than 30% of fields. NSD = No spores observed.

Approved Signatories:

Gabriel Aldy
Analyst

Page 1 of 1

Leslie Crisp
General Manager

Chad Lytle
Technical Manager

Notes: Fungi identification is based on keys and reference standards for known allergenic spores. Sample analysis is performed only by professionally trained individuals. This test report relates only to the items tested. CA Labs is accredited by AIHA for fungi and identification. This test reports relates only to the items tested. This report does not imply endorsement by any government agency. This report may not be reproduced except in full without written permission from CA Labs.

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 health concerns should arise relating to allergens, consult a physician. Unless notified in writing to return the samples covered by this report, CA Labs will store the samples for a period of thirty (30) days before discarding. A shipping and handling fee may be assessed for the return of any samples

Biologic/Plain White Light Microscopy Report Allergen Analysis

Astex, Inc.
123 Catalpa
San Antonio, TX 78209
reference number: CAL08042833

LABORATORY ANALYSIS METHOD:

Summary of light microscopy analysis of biologic organisms in tape or air cassettes, as well as viable media. Tape lift samples indicate the presence or absence and identification of known biologic organisms. Air cassettes can be quantified in surface and airborne concentrations (total count/m³). Pollen and fungi identification are based on biologic keys and reference standards for known allergenic types. Greater than five percent of all samples are re-examined by a second analyst for intralaboratory quality control. Greater than five percent of all samples are re-examined by the same analyst for quality control. Monthly quality control data is calculated and evaluated. **CA Labs is accredited by AIHA for viable fungi analysis.** This test reports relates only to the items tested. This report does not imply endorsement by any government agency. This report may not be reproduced except in full without written permission from CA Labs.

Should there be health concerns resulting from any exposure; consult a physician. Pollen and spore types identified are naturally occurring and may grow anywhere with the presence of moisture. While it is normal for fungi to be present inside all building from outside sources, growth occurs in humid conditions. Bias is present in all types of spore trap cassettes by particle size, capture, spread and counting procedures.

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.

Analysis performed at Crisp Analytical Labs, L.L.C. 2081 Hutton Dr. Suite 301 Carrollton, TX 75006. We can be reached after hours by cellular at (214) 564-8366.



Crisp Analytical Laboratories, LLC. Phone: 972-488-1414
 2081 Hutton Dr. Fax: 972-488-8006
 Suite 301 After hours Mobile: 469-233-5282
 Carrollton, TX 75006

Client Name: ASTEX INC CA Labs job # CAL
 Client Address: 123 CATALPA Billing Address: SAME
SAN ANTONIO TX 78209 (if different)
 phone number: (210) 828 9800
 fax number: (210) 829 4927 Project Name: 315 VILLA ROSA
 Reports to: RONG@ASTEXINC.COM Project Number: AES-08-1-4831

EMAIL

Sample Number:	Sample Location:	Sample Date/Time:	Sample Volume (L)
4831-01	OUTSIDE FRONT	4/21/08 3:00 P	0.75 M ³
-02	BEAR		
-I1	INSIDE: HVAC RETURN		
-I2	HALL BR1/BR2		
-I3	W. BEDROOM		
T1	WINDOWS M BR		TAPE
24 HRS			
ON 08042833			
45549			

For Internal use:
 Any initial changes regarding project (indicate yes by checking line)

Custody Information:
 Samples relinquished: [Signature] 4-22-08
 Signature / Date / Time
 Samples received: _____
 Signature / Date / Time

SW 4/23/08
 Signature / Date / Time
GAM
 Signature / Date / Time