



## Astex Environmental Services, Inc.

123 Catalpa · San Antonio, TX 78209

Phone: (210) 828-9800 · Fax: (210) 829-4927

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December 10, 2007

Mr. Lucas Oliva  
San Antonio Housing Authority  
818 S. Flores  
San Antonio, Texas 78204  
Phone: (210) 477-6004  
Email: rachel\_pena@saha.org

RE: Limited Mold Inspection, 1515 NW 26<sup>th</sup> St, San Antonio, Texas  
Astex Project #AES-07-C-4602

Dear Mr. Oliva,

Pursuant to your request, on December 4, 2007, 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 1515 NW 26<sup>th</sup> St, San Antonio, Texas to investigate the general microbial conditions in the Model Home.

### *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 – in bedroom with broken window - 1 sample
  3. inside – hall between Bedrooms 2 and 3 - 1 sample
  4. outside comparison/control sample - 2 samples

Note: These samples were delivered to the contract lab, Crisp Analytical Laboratories, 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***

Small dots of visible mold and evidence of water intrusion were observed along the windowsill within the bedroom (referred to as Bedroom #1) with a broken window and only the perimeter wall with the broken window was found to have elevated moisture levels.

***Temperature and Humidity Levels***

Temperature readings within the house were from 62.0 to 66.0 degrees Fahrenheit and humidity was noted to be between 35.5 and 38.7 percent

***Analytical Results***

The Air-O-Cell Samples were collected by Astex personnel on the morning of December 4, 2007 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 verses the control (i.e. no history of contamination) samples and/or outside levels.

During this limited investigation, the following observations were noted:

**Air-O-Cells (Fungal Spores - Air-O-Cells):**

- Outdoor air had typical levels of total fungal spores, dominated by *Cladosporium* and there were only low levels of *Aspergillus/Penicillium*-like spores.
- Indoor air had high levels of total fungal spores (3,696 to 5,760 counts/M<sup>3</sup>) compared to outdoor air (5,376 and 5,664 counts/M<sup>3</sup>) and although the distribution of spores was typical of the outdoor air with *Cladosporium* being dominant, moderate to high levels of *Aspergillus/Penicillium*-like spores were identified in all three indoor samples (see table below:

Location	Indoor	Outdoor
HVAC return intake	<b>576 counts/M<sup>3</sup></b>	336 counts/M <sup>3</sup>
Inside Bedroom #1 (broken window)	<b>1,824 counts/M<sup>3</sup></b>	336 counts/M <sup>3</sup>
Hall between Bedrooms #1 and #2 (bedroom #1 door was closed)	<b>1,248 counts/M<sup>3</sup></b>	336 counts/M <sup>3</sup>

***Conclusions/Recommendations***

- Since all three indoor air samples identified elevated levels of *Aspergillus/Penicillium*-like spores as compared with the two outside control/comparison sample levels, either (1) additional investigation should be conducted throughout the home or (2) the window in Bedroom #1 should be repaired and the house should be HEPA vacuumed and wiped down by a Texas licensed mold contractor and then re-sampled for clearance purposes. Additionally at least two air scrubbers should be placed in the house and remain in place for a minimum of 48 hours after cleaning is accomplished.

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**

**Astexx, Inc.**  
**123 Catalpa**  
**San Antonio, TX 78209**  
phone: 210-828-9800  
fax: 210-829-4927  
reference number: CAL07127579

PO #:  
Turnaround Time: 24 Hour  
Received: 12/5/07 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 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 Hulton 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 CA Lab Project #: CAL07127579 Date: 12/5/07 EK  
 Address: 123 Catalpa San Antonio, TX 7820 Analysis: Light Microscopy identification of pollen/fungal spore per CA Labs Air-o-cell method page # 1  
 Project name: SAHA - 1515 NW 26th St.  
 Attn: Ron Greenberg Sample media : Air-o-cell / Cyclex D (airborne)

Sample # Location Volume	4602-01 Outside Front 75		4602-02 Outside Rear 75		4602-11 Insider Return 75		4602-12 Inside BRTw/ broken wind. 75		4602-13 Inside Hall b/w BR2 & BR3 75			
	Cnts./ m3	Per- cent	Total Cnts.	Per- cent	Total Cnts.	Per- cent	Total Cnts.	Per- cent	Total Cnts.	Per- cent		
Alternaria	7	96	1.8	7	96	1.7	4	48	1.1	4	48	1.3
Ascomycetes	29	384	7.1	36	480	8.5	4	48	1.1	7	96	2.6
Basidiomycetes	7	96	1.8	18	240	4.2						
Botrytis												
Chaetomium												
Cladosporium	331	4,416	82.1	324	4,320	76.3	274	3,648	84.4	281	3,744	65.0
Curvularia	7	96	1.8	7	96	1.7						
Dreschslera/Bipolaris	4	48	0.9									
Epicoccum				4	48	0.8						
Oidium/Pero												
Nigrospora	4	48	0.9	4	48	0.8				7	96	1.7
Penicillium/Asp	14	192	3.6	25	336	5.9	43	576	13.3	137	1,824	31.7
Periconia/Myx										94	1,248	33.8
Pithomyces												
Pseudo/Cercospora												
Rust												
Smut												
Stachybotrys												
Pollen				4	48							
Hyphae	4	48		7	96		4	48		4	48	
Particulate	4	48		4	48		4	48		4	48	
	403	5,376		425	5,664		324	4,320		432	5,760	
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  
 Dallas Baton Rouge Houston

Analyst - Chad Lytle  
 General Manager - Leslie Crisp

# CA Labs

Crisp Analytical Laboratories, LLC.  
 2081 Hutton Dr.  
 Suite 301  
 Carrollton, TX 75006

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

phone number: (210) 828 9800  
 fax number: (210) 829 4927

Project Name: SAHA - 1515 NW 20TH ST  
 Project Number: AES 07-C-4602

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

Sample Number:	Sample Location:	Sample Date/Time:	Sample Volume (L)
4602-01	OUTSIDE FRONT	12/4/07 9:00A	0.75 m <sup>3</sup>
4602-02	REAR		
4602-11	INSIDE RETURN		
4602-12	BR1 w/BROKEN WIND.		
4602-13	HALL BETWEEN BR2 & BR3		
24 HR TURN			

For internal use:  
 Any initial changes regarding project ( indicate yes by checking line ) \_\_\_\_\_

Custody Information:  
 Samples relinquished: [Signature] 12/4/07  
 Signature / Date / Time

Samples relinquished: \_\_\_\_\_  
 Signature / Date / Time

Samples received: \_\_\_\_\_  
 Signature / Date / Time

Samples received: \_\_\_\_\_  
 Signature / Date / Time