



**Environmental Air Quality Professionals, Inc.**  
**(EAQP)**

P. O. Box 889, Dalton, GA 30722-0889  
Phone: 706.278.3202, Fax: 706.279.3275

January 30, 2007

Disaster Services, Inc. (DSI) followed and applied Serum Products, LLC procedures and products using Serum 1000 and 2000 to heavy microbial growth on wooded members inside ABC Extreme Makeover house in Georgia at Lake Arrowhead. Samples were removed from the air and surface during the ABC Extreme Makeover project on January 12, 2007.

**AIR Sampling:** Air-O-Cell Cassette Analysis for Total Air Sampling-Spore Trap-Fungal Spores & Other Airborne Particulates (Optical Microscopy)

Air samples for fungal (mold) spores were collected using an Air-O-Cell Cassette Spore Trap operating at flow rate of approximately 15 liters per minute (flow rates were calibrated between each sample). The collected samples were examined by direct microscopy in the laboratory. Fungal spores were identified to morphological genera and results were expressed as spore count per cubic meter (Spore Count/M<sup>3</sup>). The air samples were transported to an independent analytical laboratory for analysis.

The air inside of the working treated area of the house was excellent without significant amounts of specific fungal genus and/or species of concern.

**Air-O-Cell(™) Cassette Analysis of Fungal Spores & Other Airborne Particulates by Optical Microscopy**

Lab Sample Number	070700174-0001			070700174-0006		
	Client Sample ID	Volume	Sample Location	Raw Count	Spores/m <sup>3</sup>	% of Total
	1	75	INSIDE			
	6	75	OUTSIDE			
<b>Spore Types</b>	<b>Raw Count</b>	<b>Spores/m<sup>3</sup></b>	<b>% of Total</b>	<b>Raw Count</b>	<b>Spores/m<sup>3</sup></b>	<b>% of Total</b>
Agroclybe/Coprinus	1	43	12.5	-	-	-
Ascospores	4	172	50	2	86	33.3
Aspergillus/Penicillium	1	43	12.5	-	-	-
Cladosporium	2	86	25	-	-	-
Myxomycete	-	-	-	1	43	16.7
Nigrospora	-	-	-	1	43	16.7
Scopulariopsis	-	-	-	1	43	16.7
Torula	-	-	-	1	43	16.7
<b>Total Fungi</b>	<b>8</b>	<b>344</b>	<b>100</b>	<b>6</b>	<b>258</b>	<b>100</b>
Fibrous Particulate	3	129		1	43	
Hyphal Fragment	2	86		6	258	
Pollen	2	86		-	-	-
Analytical Sensitivity		43			43	
Skin Fragments (1-4)		1			1	
Background (1-5)		3			3	

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*Registered Environmentalists, Air Quality Professionals & Industrial Hygienist: Forensic, Analysis, Litigation Support, Inspection and Investigations of Commercial & Residential Buildings.*

P.O. Box 889 Dalton, GA 30722-0889 & P.O. Box 90068, Chattanooga, TN 37443-0068

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[www.HealthyAirQuality.com](http://www.HealthyAirQuality.com)



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### Viable Surface Bio-mass Sampling-culture

- Swab Samples #2 & #3 were removed after the Serum 1000 was applied BUT BEFORE cleaning and Sealing with Serum 2000. NOTE=lots of dirt, saw dust and other mitigating circumstances were present and all occurring at the same time. The multitude of different teams and workers were all under time constraints.
- Swab Sample# 4 was removed after the Cleaning and BEFORE the sealant application of the Serum 2000. \*\*\*The application the Serum 1000 and subsequent cleaning resulted in over 99.8% cleaning efficacy of the viable Bio-mass BEFORE the application of the Serum 2000 sealant.
- Swab Sample# 5 was taken ¼ inches beneath the surface of the wood. No active Bio-mass was detected.

### Identification and Enumeration of Culturable Fungi by Swab-Genus Level ID

Sample Description	Location	Media	Temp (C)	Sample Measure	Dilutio	Fungal Identification	Colony	CFUs
<u>2</u> 070700174-0002	<u>STUD (MF)</u>	MEA, DG18, Cellulose	25	1 in <sup>2</sup>	10000	<i>Penicillium sp.</i> <b>Total</b>	49 <b>49</b>	490,000/in <sup>2</sup> <b>490,000/in<sup>2</sup></b>
<u>3</u> 070700174-0003	<u>RAFTER (MF)</u>	MEA, DG18, Cellulose	25	1 in <sup>2</sup>	1000 10000	<i>Cladosporium sp.</i> <i>Penicillium sp.</i> <b>Total</b>	13 43 <b>56</b>	13,000/in <sup>2</sup> 430,000/in <sup>2</sup> <b>443,000/in<sup>2</sup></b>
<u>4</u> 070700174-0004	<u>FLOOR JOIST</u>	MEA, DG18, Cellulose	25	1 in <sup>2</sup>	100 100 100	<i>Aspergillus sp.</i> <i>Cladosporium sp.</i> <i>Penicillium sp.</i> <b>Total</b>	8 1 2 <b>11</b>	800/in <sup>2</sup> 100/in <sup>2</sup> 200/in <sup>2</sup> <b>1,100/in<sup>2</sup></b>
<u>5</u> 070700174-0005 1/4inch deep	<u>INSIDE FLOOR JOIST</u>	MEA, DG18, Cellulose	25	1 in <sup>2</sup>		<b>None Detected</b>		

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# CREREDENTIALS

Walter H. Carter, President: REM # 5873<sup>1</sup>, RPIH<sup>2</sup> # 08490902, <sup>13</sup>CIEC # 0607135, AIHA<sup>3</sup> # 151419, ACGIH<sup>4</sup>, IOHA<sup>5</sup> # 303527, IAQA<sup>6</sup>, ISIAQ<sup>7</sup> #0567, CIAQP<sup>8</sup> # 17638, ICCI<sup>9</sup> # 5131030, CMRS<sup>10</sup>, CIAQC<sup>11</sup>, MLP<sup>12</sup>, EP<sup>14</sup>

<sup>1</sup>Registered Environmental Manager with NREP (National Registered Environmental Professionals),

<sup>2</sup>Registered Professional Industrial Hygienist (RPIH) with the Association of Professional Industrial Hygienists, <sup>3</sup>American Industrial Hygiene Association, <sup>4</sup>American Conference of Governmental Industrial Hygienists, <sup>5</sup>International Occupational Hygiene Association, <sup>6</sup>IAQA (Indoor Air Quality Association), <sup>7</sup>International Society of Indoor Air Quality & Climate, <sup>8</sup>Certified Indoor Air Quality Professional AEE (Association of Energy Engineers), <sup>9</sup>International Code Council, Inc. <sup>10</sup>Council-certified Mold Remediation Supervisor and <sup>11</sup>Certified Indoor Air Quality Consultant -AmIAQ Council, <sup>12</sup>Mold Loss Prevention-Indoor Air Quality Association (IAQA), <sup>13</sup>Council-certified Indoor Environmental Consultant-AmIAQ (American Indoor Air Quality Council), EP<sup>14</sup> Environmental Professional as per 40 CFR Part 312 (312.10)-AAI rule-US congress

Dewayne R. Miller, Vice President: RPIH<sup>1</sup> # 08500902, REPA#3016<sup>2</sup>, CIEC<sup>11</sup> # 0607139, AIHA<sup>3</sup> # 151418, IAQA<sup>4</sup>, ISIAQ<sup>5</sup> #0568, CIAQP<sup>6</sup> # 317, ICCI<sup>7</sup> # 5131036, CMRS<sup>8</sup>, CIAQI<sup>9</sup>, ASCS<sup>10</sup>#04200507, EP<sup>12</sup>

<sup>1</sup>Registered Professional Industrial Hygienist (RPIH) with the Association of Professional Industrial Hygienists, <sup>2</sup>Registered Environmental Property Assessor with NREP (National Registered Environmental Professionals), <sup>3</sup>American Industrial Hygiene Association, <sup>4</sup>IAQA (Indoor Air Quality Association), <sup>5</sup>International Society of Indoor Air Quality & Climate, <sup>6</sup>Certified Indoor Air Quality Professional AEE (Association of Energy Engineers), <sup>7</sup> International Code Council, Inc., <sup>8</sup>Certified Mold Remediation Supervisor and <sup>9</sup>Certified Indoor Air Quality Consultant -AmIAQ Council, <sup>10</sup>Certified Indoor Environmentalist- Indoor Air Quality Association (IAQA), <sup>10</sup> NADCA Air System Cleaning Specialist (ASCS)-National Air Duct Cleaners Association, <sup>11</sup>Council-certified Indoor Environmental Consultant-AmIAQ (American Indoor Air Quality Council), EP<sup>12</sup> Environmental Professional as per 40 CFR Part 312 (312.10)-AAI rule-US congress

## **IAQ/IEQ (Indoor Air/Environment Quality)**

### **INDUSTRIAL/ COMMERCIAL/ RESIDENTIAL HYGIENISTS**

#### **NATIONAL REGISTRATIONS, SOCIETIES, AND MEMBERSHIPS**

- ◆ Registered Professional Industrial Hygienist (RPIH) with the Association of Professional Industrial Hygienists (APIH), RPIH # 08490902 & # 08500902
- ◆ Registered Environmental Manager and Property Assessor with NREP (National Registered Environmental Professionals), REM # 5873, REPA # 2844 & # 3016
- ◆ AmIAQ: Council-certified Indoor Environmental Consultant (CIEC# 0607135 & 0607139) and Council-certified Microbial Remediation Supervisor (CMRS)
- ◆ American Industrial Hygiene Association, AIHA # 151419 & #151418
- ◆ American Conference of Governmental Industrial Hygienists, ACGIH # 303527
- ◆ Certified Indoor Air Quality Professional (CIAQP) #17638 & #317 with The Association of Energy Engineers
- ◆ Mold Loss Prevention (MLP) with Indoor Air Quality Association (IAQA)
- ◆ EPA Visible Emissions

#### **INTERNATIONAL REGISTRATIONS, SOCIETIES AND MEMBERSHIPS**

- ◆ International Society of Indoor Air Quality & Climate, ISIAQ # 0567 & # 0568
- ◆ International Occupational Hygiene Association, IOHA

#### **OTHER CERTIFICATIONS and QUALIFICATIONS (FEDERAL, STATE, etc.)**

Asbestos; Lead; Radon; Environmental Audits Phase I, II, III; VOC's; Particles; Bioaerosols (Fungi, Bacteria, etc.); REA; Etc.

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