SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: http://www.sanair.com E-mail: iaq@sanair.com

SanAir ID Number

06005597

FINAL REPORT

Name: Professional Environmental Solutions
Address: 2415 ILA Road
Commerce, GA 30530

Customer Job ID: 228
Customer P.O.:
Customer Job Name: Shannon

Collected Date: 9/9/2006
Received Date: 9/13/2006 10:00:00 AM
Report Date: 9/13/2006 12:18:10 PM
Analyst: Hayes, Stephen N.

Direct Identification Analysis

SanAir ID: 06005597-001 Sample #: 1 ID: Shannon Res TL-1

D3-Direct ID Analysis on Tape
Quantitative Direct ID

Fungi	Estimated Amount	
Penicillium species	Heavy	380,000 spores/cm sq.

SanAir ID: 06005597-002 Sample #: 00 ID: Shannon Res TL-2

D3-Direct ID Analysis on Tape
Quantitative Direct ID

Fungi	Estimated Amount	
Penicillium species	Heavy	324,000 spores/cm sq.
Trichoderma species	Heavy	81,000 spores/cm sq.

SanAir ID: 06005597-003 Sample #: 00 ID: Shannon Res TL-3

D3-Direct ID Analysis on Tape
Quantitative Direct ID

Fungi	Estimated Amount	
Aspergillus/Penicillium	Rare	12 spores/cm sq.

Certification

Signature: Stephen N. Hayes Reviewed: L. Claire Macdonald

Date: 9/13/2006 Date: 9/13/2006

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ORGANISM DESCRIPTIONS

ASPERGILLUS/PENICILLIUM - These spores are easily aerosolized and can cause a variety of symptoms including allergic reactions. Most symptoms occur if the individual is immunocompromised in some way (HIV, cancer, etc). Both Penicillium and Aspergillus spores share similar morphology on non-viable analysis and therefore are lumped together into the same group. Only through the visualization of reproductive structures can the genera be distinguished. Also included in this group are the spores of the genera Trichoderma, Acremonium, Verticillium and Paecilomyces. Small, round spores of this group lack the necessary distinguishing characteristics when seen on non-viable examination.

PENICILLIUM SPECIES - Penicillium spores are ubiquitous in the environment. A wide number of organisms have been placed in this genera. Identification to species is difficult. Often found in aerosol samples. Commonly found in soil, food, cellulose, and grains. It is also found in paint and compost piles. Commonly found in carpet, wallpaper, and in interior fiberglass duct insulation. It may cause hypersensitivity pneumonitis and allergic alveolitis in susceptible individuals. It is reported to be allergenic (skin). Penicillium species also produce a wide variety of mycotoxins including but not limited to ochratoxin, patulin, and citrinin. Common cause of extrinsic asthma (immediate-type hypersensitivity: type I). Acute symptoms include edema and bronchiospasms, chronic cases may develop pulmonary emphysema. Both Penicillium and Aspergillus spores share similar morphology on non-viable analysis and therefore are lumped together into the same group. Only through the visualization of reproductive structures can the genera be distinguished.

TRICHODERMA SPECIES - Trichoderma is commonly isolated in soils, air and in plant materials. Often found in litter materials (polluted streams, sewage plants, and driftwoods). It is found on paper and in kitchens on many common tableware materials. It is usually considered non-pathogenic, however, it has the possibility to produce trichocethene mycotoxins and symptoms similar to that of "Sick Building Syndrome." Trichoderma is also considered a type I and III allergen. In the laboratory, Trichoderma can be a contaminant due to the fact that it can produce confluent growth and take over an entire culture. Materials such as wood construction and mineral fiber panels can be very affected by this fungus. The species T. viridae is often isolated from indoor air samples and house dust. In extremely rare cases, Trichoderma can cause peritonitis or pulmonary infections in immunocompromised persons.

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D3 Analysis Information

Results for direct identification analyses (D3) are quantitative. Estimates of mycelial growth as rare, light, moderate, or heavy are provided in addition to the counts, to provide a better overall picture of the sampled area. These estimates apply only to Quantitative Direct Analysis (D3).

Rare.....No signs of active growth. No mycelial fragments seen.

Light.....Possible active growth. Some mycelial fragments seen.

Moderate…….Probable active growth. Mycelial fragments throughout.

Heavy.....Significant active growth. Mycelial fragments throughout.