December 8, 2016

Clemson University
310 Klugh Avenue
Clemson, South Carolina 29634

Attn: Mr. W. Robert Newberry, IV
E-mail: wnewber@clemson.edu

Re: Limited Mold Investigation Report
University Union
Room 706B – Office of Susan Wright Pope
Clemson, South Carolina
Terracon Project No. 86127158 – Task 76

Dear Mr. Newberry:

Terracon Consultants, Inc. (Terracon) conducted a limited mold investigation in the offices of Susan Wright Pope (Room 706B) in the University Union, located on the main campus of Clemson University, in Clemson, South Carolina after she reported concerns related to indoor air quality. This service was conducted in general accordance with our Master Service Agreement with Clemson University.

## PROJECT DESCRIPTION

### Scope of Services

At the request of Clemson University, Terracon representative Mr. Benjamin Hestir conducted a limited mold investigation in Room 706B and the nearby offices within Suite 706 at the University Union on November 22, 2016. Reportedly, Ms. Pope and other employees there have been experiencing health related issues which they feel may be related to indoor air quality in the offices. Ms. Pope moved into her current office approximately two months prior to our investigation.

Terracon made measurements of temperature and relative humidity and conducted airborne mold sampling which consisted of collecting spore trap air samples in five locations inside the offices, and the collection of two additional samples outside for comparison.

After a review of the initial analytical findings from the spore traps, Terracon made a second visit to the suite on November 30, 2016 to look closer at the interior of the air handlers, use a moisture

meter to check some carpet and wall materials and to use a thermal imaging camera in the suite in an attempt to identify potential sources of moisture intrusion.

### Standard of Care

This limited mold investigation was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. Terracon did not attempt to identify every potential exposure or hazard present in the subject building. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our sampling. Many factors, such as weather conditions, building occupancy, ventilation patterns and seasonal variations in fungal concentrations, can affect the conditions observed. The information contained in this report should not be relied upon to represent conditions that existed prior to or after this sampling. Terracon does not warrant the services of regulatory agencies, laboratories or other third parties supplying information that may have been used in the preparation of this report.

## SAMPLING CRITERIA AND METHODS

### Physical Assessment

The physical assessment was conducted to determine whether building materials were impacted by moisture intrusion or condensate formation, and to identify the presence of visible fungal growth. The assessment focused primarily on collecting observational data (i.e., information obtained by physical assessment of the building and interviews with the building management and maintenance staff). The physical assessment can help to formulate plans for more in-depth investigation.

The physical assessment included:

- an examination of the physical structure and potential indoor and outdoor sources of moisture intrusion in the area of concern; and,
- the identification of any discoloration or odor that could indicate moisture intrusion, water damage, and/or fungal growth.

### Moisture Content in Building Materials

Excess moisture in building materials may result in the growth of fungi or bacteria. There are no regulations or standards for moisture content in installed building materials. Moisture content will vary building-to-building and across geography, depending largely on relative humidity and indoor environmental conditions. Terracon applied industry best practices and equipment manufacturer guidelines to determine the moisture content of materials in this facility.

A moisture meter was used to identify suspect water-impacted materials. Building materials have different absorptive and moisture retention properties and will come into equilibrium with environmental moisture (as indicated by relative humidity levels) or become wet by contact with water.

Our investigation was limited to accessible surfaces. A Protimeter® Mini Moisture Meter, Model BLD2000 direct-reading instrument was used to measure the moisture content of the building materials included in this investigation. The moisture meter works via the measurement of electroconductivity through the material being tested via two penetrating probes.

According to Protimeter®, readings above 16% on wood components should generally be considered excess moisture that may indicate moisture intrusion and the early stages of wood-deteriorating organism growth. Wood Moisture Equivalent (%WME) readings on materials other than wood components (e.g. drywall) above 16% WME would also be considered moisture impacted.

In addition, a FLIR model C2 infrared (IR) thermal imaging camera was utilized to suspect areas within Suite 706. Some moisture-impacted materials, such as those inside wall cavities or interstitial spaces, or materials that show no visible signs of impact may not be detected by a physical inspection or by using a moisture meter. These impacted materials may be identified using an infrared (IR) camera. Infrared imaging allows the user to visualize temperature gradients in building materials. Moist areas are typically cooler than adjacent dry areas as a result of evaporative cooling. When found, wet building materials identified using the IR camera are confirmed with the Protimeter®.

## Mold Sampling

Total mold spore trap samples were collected using Air-O-Cell™ spore trap cassettes specifically designed for the collection of airborne mold spores. Air samples were collected using a calibrated Zefon Bio-Pump™ at a flow rate of 15 liters per minute (LPM) for 5 minutes at each location.

After air sample collection, the samples were hand delivered to Southeast Environmental Microbiology Laboratories, Inc. (SEEML), Greenville, SC. SEEML is accredited by the AIHA® Laboratory Accreditation Programs, LLC under the Environmental Microbiology Laboratory Accreditation Program (EMLAP), Accreditation #173667. Air samples were analyzed by direct microscopic examination and results are reported in spores per cubic meter of air (spores/$m^3$).

To help interpret the sampling results, we compared indoor air and outdoor air measurements. High variability in airborne fungal spore concentrations can exist in different geographic locations, during different seasons, and weather patterns, and over the course of a given day. As a general rule, indoor air fungal spore concentrations in a heating, ventilation and air-conditioning (HVAC)-

supplied building are typically less than, but qualitatively similar to, fungal spore concentrations found in the outside environment.

No state or federal exposure limits have been established for fungal aerosols. Regulatory standards, medically based threshold limit or dose-response relationships have not been established for exposure to airborne or surface concentrations of mold spores. Terracon relies upon experience, professional judgment, current scientific literature, guidelines and recommendations made by professional organizations and experts, and statistical methods in interpreting mold sampling results.

### Temperature and Relative Humidity

Indoor air temperature and relative humidity are physical conditions important to the perception of comfort. The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) has published recommendations regarding thermal comfort. ASHRAE Standard 55-2013, Thermal Environmental Conditions for Human Occupancy, identifies six primary factors that affect comfort: metabolic rate (affected by the activity being performed); clothing insulation; air temperature; radiant temperature; air speed; and humidity.

Although the relationships are complex, a temperature range between 73 and 79 degrees Fahrenheit (°F) with relative humidity between roughly 20 and 60 percent (%) are recommended for persons in a conditioned setting wearing light summer clothing. Higher temperatures require lower humidity for comfort. For persons in winter clothing, temperatures can range between 68 and 75°F, with relative humidity between 20% and 60%, with preferred conditions falling between 30% and 50% for both winter and summer temperatures.

EPA recommends maintaining indoor humidity below 60%, ideally 30-50%, if possible.

Readings of temperature and relative humidity were collected with an Extech Model 445580 IAQ instrument which was calibrated by the manufacturer.

## FINDINGS

### General Observations

- The office across the hall from Suite 706 was being remodeled at the time of our inspections.
- A water leak from the air handler in the outer office in Suite 706 was reported by staff members to have occurred this fall causing the carpet to be saturated. Repairs and drying efforts were conducted.

- Staff members reported that they had been directed by University Facilities to run their air handlers all the time possibly due to lack of fresh air intake in the current HVAC system. Not all of the air handlers were on at the time of our inspections.
- The building was constructed in 1954.

## Mold Air Sampling

On the afternoon of November 22, 2016, Terracon collected five mold spore trap samples inside the offices at Suite 706 in the University Union and two samples in outdoor locations for comparison. The results of the total spore count samples analyses are summarized in Table 1 below:

Table 1: Summary of Total Spore Count Analyses – November 22, 2016

| Sample # | 706-1 | 706-2 | 706-3 | 706-4 | 706-5 | 706-6 | 706-7 |
|---|---|---|---|---|---|---|---|
| **Location Description** | **Pope Desk** | **Filing Cabinet in 706B** | **Outer Office** | **Sneeden Desk** | **Kaitlynn's desk** | **Outside Courtyard 1** | **Outside Courtyard 2** |
| **Spore Type** | **Spores/m³** | **Spores/m³** | **Spores/m³** | **Spores/m³** | **Spores/m³** | **Spores/m³** | **Spores/m³** |
| Ascospores | --- | 13 | --- | 26 | 26 | 13 | 39 |
| Basidiospores | --- | 195 | 78 | --- | 117 | 429 | 702 |
| Bipolaris/Dreschlera | --- | --- | --- | --- | --- | --- | --- |
| *Cladosporium* | 234 | 117 | 234 | 78 | 156 | 1,440 | 1,830 |
| *Curvularia* | --- | --- | --- | 39 | --- | --- | 13 |
| *Epicoccum* | --- | --- | --- | 26 | --- | --- | --- |
| Nigrospora | --- | --- | --- | 13 | --- | --- | --- |
| *Penicillium/ Aspergillus* | 195 | 975 | 13,300 | 10,500 | 975 | 195 | 351 |
| Rusts | --- | --- | --- | --- | --- | 13 | --- |
| Smuts/*Periconia*/ Myxomycetes | --- | --- | --- | 39 | --- | 39 | 39 |
| **Total** | **429** | **1,300** | **13,600** | **10,700** | **1,270** | **2,130** | **2,970** |

The highest indoor office total spore count was approximately 6.4 times higher than the lowest total spore count outside. The dominant molds indoors were Basidiospores and *Penicillium/ Aspergillus*. The dominant mold types outdoors was *Cladosporium* and Basidiospores. The weather on the day we sampled was warm (64ºF) and overcast with a steady breeze (winds 5-10 mph).

The laboratory analytical report is attached. Photographs from the sampling event are attached.

## Temperature and Relative Humidity

The indoor temperature was 69ºF and the relative humidity was 31%. The outdoor temperature was 64ºF and the relative humidity was 15%.

### Physical Assessment

On the afternoon of November 30, 2016, Terracon inspected the drain pans within the air handlers in the areas of the highest indoor mold counts from the sampling on November 22nd. This included the air handler in the outer office and in the office of Eric Sneeden. Both air handlers had small areas of suspected fungal and bacterial growth in the drain pans.

The carpets adjacent to these two air handlers were probed with a moisture meter but were found to be dry.

A FLIR Model C2 thermal imaging camera was used to observe wall, ceiling and flooring surfaces in order to attempt to identify possible water intrusion or leak issues. None were identified in the areas of concern.

## CONCLUSIONS

The following conclusions are provided based on our assessment:

- Two of the total spore counts inside were higher than outdoor air.
- *Aspergillus/Penicillium* type spores were identified at a count inside that was 50 times higher versus outside indicating a possible indoor source for amplification.
- Temperature and relative humidity were within acceptable ASHRAE and EPA guidelines.
- The offices generally appeared to be in good condition with no visually obvious dust accumulations or evidence of water intrusion.
- The air handler supply register in the Outer Office was discolored with possible fungal/bacterial growth.
- Elevated spore counts identified could be a remnant from the previous water leak that saturated the carpet in the outer office. There could also be a contribution to the elevated counts from the air handlers drain pans or from a source not yet discovered.
- Terracon recommends a thorough cleaning of the two air handlers previously mentioned and cleaning of the carpet in the outer office and in the office of Eric Sneeden with a HEPA vacuum.

Terracon appreciates the opportunity to provide this service to Clemson University. If you have any questions regarding this limited mold investigation report, please contact the undersigned at 864-292-2901.

Sincerely,
**Terracon Consultants, Inc.**

Benjamin Hestir, P.E.
Project Industrial Hygienist

Jeffrey A. Gurrie
Senior Industrial Hygienist

Attachments: Photographs
Laboratory Results

# Photographs




**Photo #1**



**Photo #2** Office of Susan Pope – Room 706B

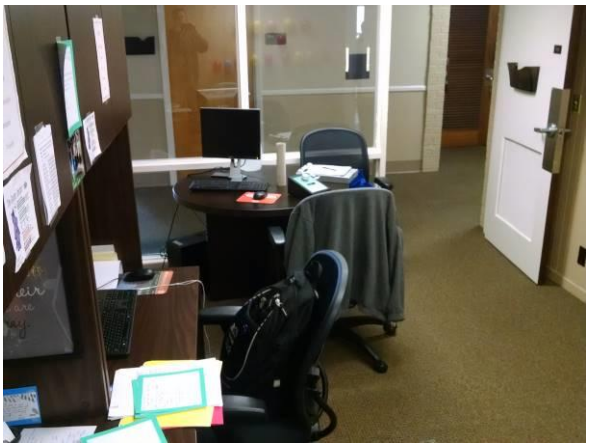


**Photo #3** Outer Office in Suite 706



**Photo #4** Growth of fungus/bacteria on Outer Office air handler register

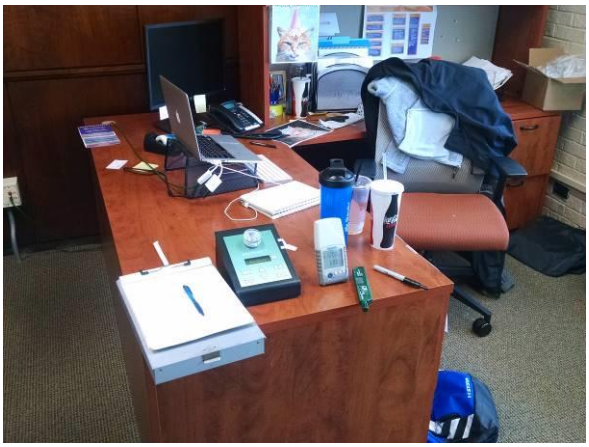


**Photo #5** Office of Eric Sneeden in Suite 706



**Photo #6** Location of second outdoor air sample



**Photo #7** Outer office air handler drain pan



**Photo #8** Dehumidifier in office of Eric Sneeden – about ¾ full



**Photo #9** Drain pan inside air handler in Eric Sneedens' office



**Photo #10** View of drain leading to primary drain pan in Eric Sneedens' office

# Laboratory Results

SEEML Reference Number:
161123016

**Southeast Environmental Microbiology Laboratories**
506 Laurens Rd
Greenville, SC 29607
Phone: (864) 233-3770
FAX: (864) 233-6589

The information and data for **Terracon** has been checked for thoroughness and accuracy. The following reports are contained within this document:

- ☐ Direct Exam Report
- ☒ Spore Trap Report
- ☐ Quantitative Fungal Report
- ☐ Andersen Fungal Report
- ☐ Quantitative Direct Exam Report

Lab Manager Review: Rafael Berrios Date: 11/23/16

Thank you for using SEEML laboratories. We strive to provide superior quality and service.
SEEML laboratories are AIHA (American Industrial Hygiene Association) Environmental Microbiology Accredited laboratory for only fungal analysis Air-Direct Examination (EMLAP # 173667).

The data within this report is reliable to three significant figures. The third significant figure is technically unjustified. In this instance, the third figure is reported as an estimate to facilitate the interpretation by the customer.

Confidentiality Notice:
The document(s) contained herein are confidential and privileged information, intended for the exclusive use of the individual or entity named above. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of the document(s) is strictly prohibited. If you have received this document in error, please immediately notify us by telephone to arrange for its return. Thank you.

Guidelines for Interpretation:
No accepted quantitative regulatory standards currently exist by which to assess the health risks related to mold and bacterial exposure. Molds and bacteria have been associated with a variety of health effects and sensitivity varies from person to person.
Several organizations, including: the American Conference of Government Industrial Hygienists (ACGIH); the American Industrial Hygiene Association (AIHA); the Indoor Air Quality Association (IAQA); the United States Environmental Protection Agency (USEPA); the Centers for Disease Control (CDC), as well as the California Department of Health Services (CADHS), have all published guidelines for assessment and interpretation of mold resulting from water intrusion in buildings.

Interpretation of the data and information within this document is left to the company, consultant, and/or persons who conducted the fieldwork.

# Spore Trap Report

| | |
|---|---|
| Attention: Ben Hestir | Date Sampled: 11/22/16 |
| Terracon | Date Received: 11/23/16 |
| 72 Pointe Circle | Date Analyzed: 11/23/16 |
| Greenville, SC 29615 | Date Reported: 11/23/16 |
| | Date Revised: |
| | Project Name: Student Union 706B |
| | Project Address: 86127158 Task 76 |
| | Project City, State, ZIP: |
| | SEEML Reference # : 161123016 |

**TEST METHOD: DIRECT MICROSCOPY EXAMINATION AT 400X (100% OF TRACE ANALYZED) SEEML SOP 7**

| Client Sample ID | 706-1 | | | 706-2 | | | 706-3 | | |
|---|---|---|---|---|---|---|---|---|---|
| Location | Rm. 706B Desk | | | Rm. 706B Filing Cabinet | | | 706 Outer Office | | |
| Lab Sample ID | 161123016-046 | | | 161123016-047 | | | 161123016-048 | | |
| Detection Limit (spores/$m^3$) | 13 | | | 13 | | | 13 | | |
| Hyphal Fragments | | | | | | | 3 | 39 | |
| Pollen | | | | | | | | | |
| Spore Trap Used | AOC | | | AOC | | | AOC | | |
| | raw ct. | spores/$m^3$ | % | raw ct. | spores/$m^3$ | % | raw ct. | spores/$m^3$ | % |
| Alternaria | | | | | | | | | |
| Ascospores | | | | 1 | 13 | 1 | | | |
| Basidiospores | | | | 15 | 195 | 15 | 6 | 78 | <1 |
| Bipolaris/Drechslera | | | | | | | | | |
| Chaetomium | | | | | | | | | |
| Cladosporium | 18 | 234 | 55 | 9 | 117 | 9 | 18 | 234 | 2 |
| Curvularia | | | | | | | | | |
| Epicoccum | | | | | | | | | |
| Cercospora | | | | | | | | | |
| Fusarium | | | | | | | | | |
| Memnoniella | | | | | | | | | |
| Nigrospora | | | | | | | | | |
| Penicillium/Aspergillus | 15 | 195 | 45 | 75 | 975 | 75 | 1026 | 13300 | 98 |
| Polythrincium | | | | | | | | | |
| Rusts | | | | | | | | | |
| Smuts/Periconia/Myxomy | | | | | | | | | |
| Spegazzinia | | | | | | | | | |
| Stachybotrys | | | | | | | | | |
| Stemphylium | | | | | | | | | |
| Tetraploa | | | | | | | | | |
| Torula | | | | | | | | | |
| Ulocladium | | | | | | | | | |
| Colorless/Other Brown 2 | | | | | | | | | |
| Oidium | | | | | | | | | |
| Zygomycetes | | | | | | | | | |
| Pithomyces | | | | | | | | | |
| Background debris (1-5)3 | 3 | | | 3 | | | 3 | | |
| Sample Volume(liters) | 75 | | | 75 | | | 75 | | |
| **TOTAL SPORES/$M^3$** | 33 | **429** | | 100 | **1300** | | 1050 | **13600** | |

Comments: Condition of the sample(s) upon receipt: Acceptable.

1=Total % may not equal 100 due to rounding.

2 = Colorless,other Brown are spores without a distinctive morphology on spore traps and non-viable surface samples.

3 = Background debris is the amount of particulate matter present on the slide and is graded from 1-5 with 1 = very light, 2= Light, 3 = Medium, 4 = Heavy, 5 = Very Heavy. The higher the rating the more likelihood spores may be underestimated. A rating of 5 should be interpreted as minimal counts and may actually be higher than reported.

The reporting limit is 1 Spore/sample.

Disclaimer: This report relates only to the samples tested

Respectfully submitted, SEEML

*Rafael Berrios*

Rafael Berrios, Approved Laboratory Signatory

506 Laurens Road
Greenville, SC 29607
Phone: (864) 233- 3770
Fax: (864) 233-6589
AIHA-LAP, LLC EMLAP # 173667

# Spore Trap Report

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|---|---|
| Attention: Ben Hestir | Date Sampled: 11/22/16 |
| Terracon | Date Received: 11/23/16 |
| 72 Pointe Circle | Date Analyzed: 11/23/16 |
| Greenville, SC 29615 | Date Reported: 11/23/16 |
| | Date Revised: |
| | Project Name: Student Union 706B |
| | Project Address: 86127158 Task 76 |
| | Project City, State, ZIP: |
| | SEEML Reference # : 161123016 |

**TEST METHOD: DIRECT MICROSCOPY EXAMINATION AT 400X (100% OF TRACE ANALYZED) SEEML SOP 7**

| Client Sample ID | 706-4 | | | 706-5 | | | 706-6 | | |
|---|---|---|---|---|---|---|---|---|---|
| Location | Desk of Eric Sneeden | | | Rm. 706C- Kaitlynn's Desk | | | Outside- Courtyard 1 | | |
| Lab Sample ID | 161123016-049 | | | 161123016-050 | | | 161123016-051 | | |
| Detection Limit (spores/$m^3$) | 13 | | | 13 | | | 13 | | |
| Hyphal Fragments | | | | | | | 3 | 39 | |
| Pollen | | | | 1 | 13 | | | | |
| Spore Trap Used | AOC | | | AOC | | | AOC | | |
| | raw ct. | spores/$m^3$ | % | raw ct. | spores/$m^3$ | % | raw ct. | spores/$m^3$ | % |
| Alternaria | | | | | | | | | |
| Ascospores | 2 | 26 | <1 | 2 | 26 | 2 | 1 | 13 | <1 |
| Basidiospores | | | | 9 | 117 | 9 | 33 | 429 | 20 |
| Bipolaris/Drechslera | | | | | | | | | |
| Chaetomium | | | | | | | | | |
| Cladosporium | 6 | 78 | <1 | 12 | 156 | 12 | 111 | 1440 | 68 |
| Curvularia | 3 | 39 | <1 | | | | | | |
| Epicoccum | 2 | 26 | <1 | | | | | | |
| Cercospora | | | | | | | | | |
| Fusarium | | | | | | | | | |
| Memnoniella | | | | | | | | | |
| Nigrospora | 1 | 13 | <1 | | | | | | |
| Penicillium/Aspergillus | 804 | 10500 | 98 | 75 | 975 | 77 | 15 | 195 | 9 |
| Polythrincium | | | | | | | | | |
| Rusts | | | | | | | 1 | 13 | <1 |
| Smuts/Periconia/Myxomy | 3 | 39 | <1 | | | | 3 | 39 | 2 |
| Spegazzinia | | | | | | | | | |
| Stachybotrys | | | | | | | | | |
| Stemphylium | | | | | | | | | |
| Tetraploa | | | | | | | | | |
| Torula | | | | | | | | | |
| Ulocladium | | | | | | | | | |
| Colorless/Other Brown 2 | | | | | | | | | |
| Oidium | | | | | | | | | |
| Zygomycetes | | | | | | | | | |
| Pithomyces | | | | | | | | | |
| Background debris (1-5)3 | 3 | | | 3 | | | 3 | | |
| Sample Volume(liters) | 75 | | | 75 | | | 75 | | |
| **TOTAL SPORES/$M^3$** | 821 | **10700** | | 98 | **1270** | | 164 | **2130** | |

Comments: Condition of the sample(s) upon receipt: Acceptable.

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Respectfully submitted, SEEML

*Rafael Berrios*

Rafael Berrios, Approved Laboratory Signatory

506 Laurens Road
Greenville, SC 29607
Phone: (864) 233- 3770
Fax: (864) 233-6589
AIHA-LAP, LLC EMLAP # 173667

# Spore Trap Report

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|---|---|
| Attention: Ben Hestir | Date Sampled: 11/22/16 |
| Terracon | Date Received: 11/23/16 |
| 72 Pointe Circle | Date Analyzed: 11/23/16 |
| Greenville, SC 29615 | Date Reported: 11/23/16 |
| | Date Revised: |
| | Project Name: Student Union 706B |
| | Project Address: 86127158 Task 76 |
| | Project City, State, ZIP: |
| | SEEML Reference # : 161123016 |

**TEST METHOD: DIRECT MICROSCOPY EXAMINATION AT 400X (100% OF TRACE ANALYZED) SEEML SOP 7**

| Client Sample ID | 706-7 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Location | Outside- Courtyard 2 | | | | | | | | |
| Lab Sample ID | 161123016-052 | | | | | | | | |
| Detection Limit (spores/$m^3$) | 13 | | | | | | | | |
| Hyphal Fragments | 7 | 91 | | | | | | | |
| Pollen | 1 | 13 | | | | | | | |
| Spore Trap Used | AOC | | | | | | | | |
| | raw ct. | spores/$m^3$ | % | | | | | | |
| Alternaria | | | | | | | | | |
| Ascospores | 3 | 39 | 1 | | | | | | |
| Basidiospores | 54 | 702 | 24 | | | | | | |
| Bipolaris/Drechslera | | | | | | | | | |
| Chaetomium | | | | | | | | | |
| Cladosporium | 141 | 1830 | 62 | | | | | | |
| Curvularia | 1 | 13 | <1 | | | | | | |
| Epicoccum | | | | | | | | | |
| Cercospora | | | | | | | | | |
| Fusarium | | | | | | | | | |
| Memnoniella | | | | | | | | | |
| Nigrospora | | | | | | | | | |
| Penicillium/Aspergillus | 27 | 351 | 12 | | | | | | |
| Polythrincium | | | | | | | | | |
| Rusts | | | | | | | | | |
| Smuts/Periconia/Myxomy | 3 | 39 | 1 | | | | | | |
| Spegazzinia | | | | | | | | | |
| Stachybotrys | | | | | | | | | |
| Stemphylium | | | | | | | | | |
| Tetraploa | | | | | | | | | |
| Torula | | | | | | | | | |
| Ulocladium | | | | | | | | | |
| Colorless/Other Brown 2 | | | | | | | | | |
| Oidium | | | | | | | | | |
| Zygomycetes | | | | | | | | | |
| Pithomyces | | | | | | | | | |
| Background debris (1-5)3 | 3 | | | | | | | | |
| Sample Volume(liters) | 75 | | | | | | | | |
| **TOTAL SPORES/$M^3$** | 229 | **2970** | | | | | | | |

Comments: Condition of the sample(s) upon receipt: Acceptable.

1=Total % may not equal 100 due to rounding.

2 = Colorless,other Brown are spores without a distinctive morphology on spore traps and non-viable surface samples.

3 = Background debris is the amount of particulate matter present on the slide and is graded from 1-5 with 1 = very light, 2= Light, 3 = Medium, 4 = Heavy, 5 = Very Heavy. The higher the rating the more likelihood spores may be underestimated. A rating of 5 should be interpreted as minimal counts and may actually be higher than reported.

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*Rafael Berrios*

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Greenville, SC 29607
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Fax: (864) 233-6589
AIHA-LAP, LLC EMLAP # 173667

# Southeast Environmental Microbiology Laboratories
## Chain of Custody

506 Laurens Rd, Greenville, SC 29607
Phone : 864-233-3770, Fax: 864-233-6589, www.seeml.com, AIHA-LAP, LLC. (EMLAP) #173667



| For Lab Use Only | | | |
|---|---|---|---|
| Condition of samples is acceptable | ☑ YES ☐ NO | SEEML Ref #: 161123016 | Lab ID: 046-052 |

| Company Information | | Client Information | | Environmental Conditions | |
|---|---|---|---|---|---|
| (Project Manager) | Ben Hestir | Date Sampled: | 11/22/16 | Precipitation in last 16hrs: | None |
| (Company Name) | Terracon | Project Name: | Student Union 706B | Relative Humidity I/O: | 26% / 14% |
| (Address) | 72 Pointe Circle | Project Address: | 86127158 Task 76 | Temperature I/O: | 68°F / 69°F |
| (City, State, Zip) | Greenville, SC 29615 | City, State, Zip: | | Wind Conditions | calm |
| (Phone) | 864-293-7398 | | | | |
| (Email) | ben.hestir@terracon.com | | | | |

**Sample Type Abbreviations:**
A- Allergenco S-Swab AP-Andersen Plate
AOC- Air O Cell T-Tape W- Water
M5- Micro 5 B- Bulk D- Dust

**Analysis Type:**
1. SporeTrap, Air Sample Analysis-Same Day
2. Direct Exam Surface Sample Analysis -Same Day
3. Culturable Air / Surface Samples -7-10 days

| Sample ID | Sample Location | Sample Type | Analysis Type | *Area | **Volume (L) | Notes |
|---|---|---|---|---|---|---|
| 706-1 | RM 706B Desk | AOC | 1 | | 75 | |
| 706-2 | RM 706B Filing Cabinet | " | " | | " | |
| 706-3 | 706 Outer office | " | " | | " | |
| 706-4 | Desk of Eric Sneeden | " | " | | " | |
| 706-5 | RM 706C - Kaitlynn's desk | " | " | | " | |
| 706-6 | Outside - courtyard 1 | " | " | | " | |
| 706-7 | Outside - courtyard 2 | " | " | | " | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| Relinquished By: | Date/Time | Recieved By: | Date/Time |
|---|---|---|---|
| | 11/23/16 0933 | | 11-23-16 |

* Area is only required for culturable surface samples.
** Volume = Pump setting (L/min) x minutes