REAL INNOVATION
LIMITLESS OPPORTUNITY
LEWISVILLE INDEPENDENT SCHOOL DISTRICT

**DATE:** October 4, 2016

**TO:** Michelle Wooten, Principal

**SUBJECT:** Donald ES - IAQ - Results report - Rooms 100, 101, 102

On Friday 9/30, Apex-Titan Air tested Rooms 100, 101 and 102. It is typically assumed that indoor spore levels in an area with filtered or air conditioned air, and activity levels associated with schools average below the outdoor levels. Data from the airborne fungi sampling indicated that the total indoor concentration of mold/fungi in Room 100, was **1.1%**, Room 101, was **3.6%**, and Room 100, was **2.6%**, of the outdoor levels. Utilizing this theory, the indoor concentrations are well within the acceptable guidelines for areas with filtered air or air conditioning. If you have any questions, please call me.
Thanks,
Paul

Paul Siddall
Maintenance Energy Auditor (IAQ)
Facility Services
Lewisville ISD
469-446-8882

**DATE:** September 28, 2016

**TO:** Michelle Wooten, Principal

**SUBJECT:** Donald ES - IAQ - Initial Contact - Rooms 100 & 102

On Tuesday 9/27, I received W.O. #341370: *"We would like the air quality tested in rooms 102 &100. It has an odor to it since the flooding from the roof repair."* On Wednesday 9/28 6:45 AM, I inspected both rooms. This morning, I requested a P.O. to Apex Titan, to do an Air Test in each room. This should be done by Friday 9/30, and we should have the test results by Tuesday 10/4. If you have any questions, please contact me.
Thanks,
Paul

Paul Siddall
Maintenance Energy Auditor (IAQ)
Facility Services
Lewisville ISD
469-446-8882

October 6, 2016

Lewisville Independent School District
340 Lake Haven
Lewisville, Texas 75057
Attn: Mr. Paul Siddall

Re: Limited Mold Assessment Services
Donald Elementary School
Rooms 100, 101 and 102
2400 Forest Vista
Flower Mound, Texas
LISD PO No. P91704355-00
Apex Project No. 725010727033

**Introduction**

Apex TITAN, Inc., a subsidiary of Apex Companies, LLC (APEX) conducted limited mold assessment activities for the Lewisville Independent School District (Lewisville I.S.D.) within Donald Elementary School located at 2400 Forest Vista in Flower Mound, Texas (hereinafter referred to as the "Site"). The investigation was limited to areas of the Site identified by Lewisville I.S.D. as described below. The assessment was performed by Mr. Clinton S. Jech, a State of Texas licensed Mold Assessment Technician (Lic. No. MAT1075) on September 30, 2016. Apex's mold services definitions and limitations are included as an attachment to this report.

**Investigation Areas**

Lewisville I.S.D. identified the following physical portions of the Site as the target investigation areas ("Investigation Areas") for mold assessment: readily accessible areas within rooms 100, 101 and 102. Apex's mold assessment services were limited to the Investigation Area(s) identified by Lewisville, I.S.D. Additional areas or portions of the Site were out-of-scope and not included in Apex's mold assessment or this report at this time.

**Scope of Work**

As set forth in Apex's Mold Assessment Proposal (No. P725010727038) dated September 29, 2016. Apex's scope-of-work was to provide visual and/or analytical mold assessment and related services in the Investigation Areas which included:

Visual Reconnaissance: Apex performed a visual reconnaissance of the Investigation Areas for visible indications of moisture intrusion (as indicated by staining or visible moisture) and/or suspect mold growth. Apex's visual reconnaissance only included readily accessible or visible portions of the Investigation Areas.

Suspect Mold Growth Sampling and Analysis: Apex collected limited ambient air samples for nonviable mold spores utilizing Air-O-Cell cassettes. "Air-O-Cell" refers to slit impaction air sampling cassettes manufactured by Zefon Analytical Accessories, St. Petersburg, Florida.

**Site Reconnaissance Observations/Findings and Recommendations**

Apex' Mold Assessment Site reconnaissance was performed on September 30, 2016 by Mr. Clinton S. Jech. Apex's visual reconnaissance of the Investigation areas revealed the following:

**Temperature and Relative Humidity**

Temperature readings collected inside the rooms ranged from 72.1 to 73.2 degrees Fahrenheit while relative humidity ranged from 42.8 to 46.6 percent. Temperature readings collected outside the building ranged from 67.6 to 72.1 degrees Fahrenheit while outside relative humidity ranged from 53.4 to 56.3 percent.

Relative humidity is a measure of the moisture content of air and is closely tied to the comfort of the office/workplace temperature. As with temperature, there are no regulations governing acceptable office/workplace humidity ranges. Humidity levels in the office/workplace are not only related to health effects, but also have operational impacts on modern office equipment.

Workplace/office temperatures have historically been considered a subjective factor because the perception of uncomfortable temperature levels is specific to each individual. There are no regulations governing acceptable office/workplace temperature ranges, but significant research has been conducted which indicates that there are temperature ranges that are not only comfortable but also result in optimum performance. ASHRAE (American Society of Heating, Refrigerating & Air Conditioning Engineers) has published guidelines describing thermal environmental conditions that at least 80% of the persons who occupy that environment will find acceptable or "comfortable." Table I below explains the applicable limits and guidelines.

Table I
Acceptable Ranges Of Temperature And Humidity

| Relative Humidity | Winter Temperatures | Summer Temperatures |
|---|---|---|
| 30% | 68.5 to 76°F | 74 to 80°F |
| 40% | 68.5 to 75.5°F | 73 to 79.5°F |
| 50% | 68.5 to 74.5°F | 73 to 79°F |
| 60% | 68 to 74°F | 72.5 to 78°F |

Apex utilized a Protimeter Moisture Measurement System (MMS) instrument (Model No. BLD2000) to measure and diagnose dampness in the drywall within random areas. The MMS is a battery powered handheld unit that is equipped with hydrostick probes to measure moisture content in wood, drywall and other and non-conductive materials. The device measures electrical conductivity of building materials and compares the conductivity readings to an internal, electronic standard reading for normal or "dry" materials.

Moisture content readings were obtained by pushing the moisture probe pins into surfaces. The measured values were then displayed on a colored scale depicting if the materials measured were normal (dry), higher than normal but not critical (at risk) or contained excessive moisture levels (wet). Based on the manufacturer's guidelines, the instrument measurement values are described below:

| | |
|---|---|
| < 5% | Out of Range |
| > 5% but < 16% | Normal |
| > 17% but < 20% | Higher than Normal but Not Critical |
| > 20% | Excessive Moisture Levels |

Moisture meter readings taken from the walls within the rooms ranged from 8 to 12% which is considered normal by the manufacturer.

**Air Monitoring Results**

Apex collected three (3) samples from the interior of the investigation areas and two (2) samples from the exterior of the building. The microbial samples were analyzed by Steve Moody Micro Services, LLC (SMMS) in Farmers Branch, Texas; SMMS is a State of Texas licensed mold analysis laboratory and accredited under the AIHA Laboratory Quality Assurance Program for Environmental Microbiology.

Air testing performed using spore traps indicated that total airborne mold spores in the classrooms were lower as compared to those measured outside of the building at the time the sampling was performed. The total fungal spore concentration within the investigation areas ranged from 146 counts/$m^3$ to 500 counts/$m^3$, while the exterior level ranged from 8,431 to 13,781 counts/$m^3$.

Room 100

One type of mold was identified at a higher concentration within the investigation area as compared to the sample collected from the exterior of the building. Air sample(s) collected within room 100 reported Curvularia as 20 counts/$m^3$ while exterior levels were reported 13 counts/$m^3$.

Room 101

One type of mold was identified at a higher concentration within the investigation area as compared to the sample collected from the exterior of the building. Air sample(s) collected within room 101 reported Drechslera/Bipolaris Group as 20 counts/$m^3$ while exterior levels were reported 7 counts/$m^3$.

Room 102

Two types of mold were identified at a higher concentration within the investigation area as compared to the sample collected from the exterior of the building. Air sample(s) collected within room 102 reported Drechslera/Bipolaris Group as 40 counts/$m^3$ while exterior levels were reported 7 counts/$m^3$ and Curvularia as 33 counts/$m^3$ while exterior levels were reported 13 counts/$m^3$.

The American Conference of Governmental Industrial Hygienists (ACGIH) sets forth assessment criteria related to the “indoor/outdoor” relationship where the indoor air quality should be at or below that of outdoor air quality with regard to fungal spores (see ACGIH Bioaerosols, Assessment and Controls publication, 1999).

**Suspect Mold**

No visible mold was observed during the assessment. No odors or excessive dust were noted.

**Conclusions and Recommendations**

Based on Apex’s limited assessment and the analytical results collected, it appears that the indoor air quality, as it relates to airborne fungi was within recommended guidelines on the day of the assessment. Apex recommends that the areas be cleaned and further testing be performed.

If you have any questions regarding this report or if we can assist you with any other matter, please contact the undersigned at (469) 365-1140.

Sincerely,
**Apex TITAN, Inc.**

Darren G. Bowden
Senior Program Manager
Texas Mold Assessment Consultant
Lic. No. MAC0321

Attachments: Analytical Results/Chain of Custody, Mold Services Definitions & Limitations

**ATTACHMENT 1**

Analytical Results/Chain of Custody

# IAQ Mold Report

**Summary**

2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

DSHS License No.: LAB0117
AIHA EMPAT ID: 102577

**Client :** Apex Titan, Inc. - Dallas
**Project :** Donald ES, Room 100 and 102
**Project # :** 725010727033
**Sample Type:** Spore Trap, Non-cultured
**Test Method:** Mold: ASTM D7391-09 - Standard Profile

**Lab Job No. :** 16F-12519
**Report Date :** 10/04/2016 11:11 AM
**Sample Date :** 09/30/2016
**Spore Trap Type:** Zefon - Air-O-Cell



On 9/30/2016, five (5) samples were submitted by Clint Jech of Apex Titan, Inc. - Dallas (located at 12100 Ford. Rd., Suite 401, Farmers Branch, TX 75234) for Spore Trap, Non-cultured mold analysis. This report consists of three sections; a summary section, a data detail section, and an analytical notes section.

| Sample Number | Volume (liters) | Sample Description | Identification | Concentration spores/cubic meter | |
|---|---|---|---|---|---|
| 1 | 150 | Exterior, Southwest | Basidiospores | 8867 | 64% |
| | | | Cladosporium | 2480 | 18% |
| | | | Aspergillus / Penicillium | 1020 | 7% |
| | | | Ascospores | 680 | 5% |
| | | | Hyphal / Spore Fragments | 247 | 2% |
| | | | Myxomycete / Rust / Smut | 147 | 1% |
| | | | Nigrospora | 80 | <1% |
| | | | Alternaria | 60 | <1% |
| | | | Epicoccum | 53 | <1% |
| | | | Pithomyces | 40 | <1% |
| | | | Torula | 33 | <1% |
| | | | Cercospora | 20 | <1% |
| | | | Curvularia | 13 | <1% |
| | | | Fusarium | 13 | <1% |
| | | | Drechslera / Bipolaris group | 7 | <1% |
| | | | Oidium | 7 | <1% |
| | | | Pestalotia / Pestalotiopsis | 7 | <1% |
| | | | Spegazzinia | 7 | <1% |
| | | | Total: | 13781 | 100% |

# IAQ Mold Report

**Summary**

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

DSHS License No.: LAB0117
AIHA EMPAT ID: 102577

**Client :** Apex Titan, Inc. - Dallas
**Project :** Donald ES, Room 100 and 102
**Project # :** 725010727033
**Sample Type:** Spore Trap, Non-cultured
**Test Method:** Mold: ASTM D7391-09 - Standard Profile

**Lab Job No. :** 16F-12519
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| Sample Number | Volume (liters) | Sample Description | Identification | Concentration spores/cubic meter | |
|---|---|---|---|---|---|
| 2 | 150 | Exterior, South | Basidiospores | 5750 | 68% |
| | | | Cladosporium | 940 | 11% |
| | | | Ascospores | 820 | 10% |
| | | | Myxomycete / Rust / Smut | 273 | 3% |
| | | | Hyphal / Spore Fragments | 253 | 3% |
| | | | Nigrospora | 87 | 1% |
| | | | Cercospora | 80 | <1% |
| | | | Alternaria | 73 | <1% |
| | | | Paecilomyces | 67 | <1% |
| | | | Epicoccum | 47 | <1% |
| | | | Curvularia | 13 | <1% |
| | | | Zygophiala | 7 | <1% |
| | | | Spegazzinia | 7 | <1% |
| | | | Pyricularia | 7 | <1% |
| | | | Drechslera / Bipolaris group | 7 | <1% |
| | | | Total: | 8431 | 100% |
| 3 | 150 | Room 100 | Basidiospores | 53 | 36% |
| | | | Curvularia | 20 | 14% |
| | | | Cladosporium | 20 | 14% |
| | | | Aspergillus / Penicillium | 20 | 14% |
| | | | Hyphal / Spore Fragments | 13 | 9% |
| | | | Myxomycete / Rust / Smut | 13 | 9% |
| | | | Ascospores | 7 | 5% |
| | | | Total: | 146 | 100% |

# IAQ Mold Report

**Summary**

2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

DSHS License No.: LAB0117
AIHA EMPAT ID: 102577

**Client :** Apex Titan, Inc. - Dallas
**Project :** Donald ES, Room 100 and 102
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| Sample Number | Volume (liters) | Sample Description | Identification | Concentration spores/cubic meter | |
|---|---|---|---|---|---|
| 4 | 150 | Room 102 | Myxomycete / Rust / Smut | 67 | 19% |
| | | | Aspergillus / Penicillium | 60 | 17% |
| | | | Hyphal / Spore Fragments | 53 | 15% |
| | | | Drechslera / Bipolaris group | 40 | 11% |
| | | | Curvularia | 33 | 9% |
| | | | Nigrospora | 27 | 7% |
| | | | Basidiospores | 27 | 7% |
| | | | Cladosporium | 20 | 6% |
| | | | Ascospores | 20 | 6% |
| | | | Pithomyces | 7 | 2% |
| | | | Alternaria | 7 | 2% |
| | | | Total: | 361 | 100% |
| 5 | 150 | Room 101 | Hyphal / Spore Fragments | 87 | 17% |
| | | | Basidiospores | 73 | 15% |
| | | | Paecilomyces | 67 | 13% |
| | | | Cladosporium | 60 | 12% |
| | | | Myxomycete / Rust / Smut | 47 | 9% |
| | | | Aspergillus / Penicillium | 47 | 9% |
| | | | Nigrospora | 33 | 7% |
| | | | Curvularia | 33 | 7% |
| | | | Ascospores | 33 | 7% |
| | | | Drechslera / Bipolaris group | 20 | 4% |
| | | | Total: | 500 | 100% |

# IAQ Mold Report

**Summary**

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Farmers Branch, TX 75234 Phone: (972) 241-8460

DSHS License No.: LAB0117
AIHA EMPAT ID: 102577

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| Sample Number | Volume (liters) | Sample Description | Identification | Concentration spores/cubic meter |
|---|---|---|---|---|



Analyst(s): Nina Mims

Lab Manager : Heather Lopez — Approved Signatory : Heather Lopez

Lab Director : Bruce Crabb — Approved Signatory : Bruce Crabb

Thank you for choosing Moody Labs

# IAQ Mold Report

## Data Detail

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

DSHS License No.: LAB0117
AIHA EMPAT ID: 102577

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**Sample Date :** 09/30/2016
**Spore Trap Type:** Zefon - Air-O-Cell

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

| **Sample ID:** | **1** | | | | **2** | | | | **3** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location: | Exterior, Southwest | | | | Exterior, South | | | | Room 100 | | | |
| Media Expires On: | Sep 2017 | | | | Sep 2017 | | | | Sep 2017 | | | |
| Notes Included: | | | | | | | | | | | | |
| Volume: | 150 | | | | 150 | | | | 150 | | | |
| | raw ct. | MDL | spores/m³ | | raw ct. | MDL | spores/m³ | | raw ct. | MDL | spores/m³ | |
| Agaricales group | | | | | | | | | | | | |
| Alternaria | 9 | 6.67 | 60 | <1% | 11 | 6.67 | 73 | <1% | | | | |
| Ascospores | 34 | 20.00 | 680 | 5% | 41 | 20.00 | 820 | 10% | 1 | 6.67 | 7 | 5% |
| Aspergillus / Penicillium | 51 | 20.00 | 1020 | 7% | | | | | 3 | 6.67 | 20 | 14% |
| Asteromyces | | | | | | | | | | | | |
| Basidiospores | 133 | 66.67 | 8867 | 64% | 115 | 50.00 | 5750 | 68% | 8 | 6.67 | 53 | 36% |
| Cercospora | 3 | 6.67 | 20 | <1% | 12 | 6.67 | 80 | <1% | | | | |
| Chaetomium | | | | | | | | | | | | |
| Cladosporium | 124 | 20.00 | 2480 | 18% | 47 | 20.00 | 940 | 11% | 3 | 6.67 | 20 | 14% |
| Coprinus group | | | | | | | | | | | | |
| Curvularia | 2 | 6.67 | 13 | <1% | 2 | 6.67 | 13 | <1% | 3 | 6.67 | 20 | 14% |
| Diatrypaceae | | | | | | | | | | | | |
| Drechslera / Bipolaris group | 1 | 6.67 | 7 | <1% | 1 | 6.67 | 7 | <1% | | | | |
| Epicoccum | 8 | 6.67 | 53 | <1% | 7 | 6.67 | 47 | <1% | | | | |
| Fusarium | 2 | 6.67 | 13 | <1% | | | | | | | | |
| Ganoderma | | | | | | | | | | | | |
| Hyphal / Spore Fragments | 37 | 6.67 | 247 | 2% | 38 | 6.67 | 253 | 3% | 2 | 6.67 | 13 | 9% |
| Memnoniella | | | | | | | | | | | | |
| Myxomycete / Rust / Smut | 22 | 6.67 | 147 | 1% | 41 | 6.67 | 273 | 3% | 2 | 6.67 | 13 | 9% |
| Nigrospora | 12 | 6.67 | 80 | <1% | 13 | 6.67 | 87 | 1% | | | | |
| Oidium | 1 | 6.67 | 7 | <1% | | | | | | | | |
| Paecilomyces | | | | | 10 | 6.67 | 67 | <1% | | | | |
| Periconia | | | | | | | | | | | | |
| Peronospora | | | | | | | | | | | | |
| Pestalotia / Pestalotiopsis | 1 | 6.67 | 7 | <1% | | | | | | | | |
| Pithomyces | 6 | 6.67 | 40 | <1% | | | | | | | | |
| Pyricularia | | | | | 1 | 6.67 | 7 | <1% | | | | |
| Scopulariopsis | | | | | | | | | | | | |
| Spegazzinia | 1 | 6.67 | 7 | <1% | 1 | 6.67 | 7 | <1% | | | | |
| Stachybotrys | | | | | | | | | | | | |
| Tetraploa | | | | | | | | | | | | |
| Torula | 5 | 6.67 | 33 | <1% | | | | | | | | |
| Ulocladium / Stemphylium | | | | | | | | | | | | |
| Zygophiala | | | | | 1 | 6.67 | 7 | <1% | | | | |
| TOTALS | 452 | | 13781 | 100% | 341 | | 8431 | 100% | 22 | | 146 | 100% |
| Analyst | Nina Mims | | | | Nina Mims | | | | Nina Mims | | | |
| Analysis Date | 10/3/2016 | | | | 10/3/2016 | | | | 10/3/2016 | | | |
| Debris Rating | 3 | | | | 3 | | | | 4 | | | |
| Debris Composition | | | | | | | | | | | | |

# IAQ Mold Report

## Data Detail

2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

DSHS License No.: LAB0117
AIHA EMPAT ID: 102577

**Client :** Apex Titan, Inc. - Dallas
**Project :** Donald ES, Room 100 and 102
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**Lab Job No. :** 16F-12519
**Report Date :** 10/04/2016 11:11 AM
**Sample Date :** 09/30/2016
**Spore Trap Type:** Zefon - Air-O-Cell

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

| | | | |
|---|---|---|---|
| Fibers | 1/5 | 1/5 | 1/5 |
| Inorganic/Other | 3/5 | 3/5 | 2/5 |
| Insect Parts | 1/5 | 1/5 | 0/5 |
| Pollen | 2/5 | 2/5 | 1/5 |
| Skin/Dander | 0/5 | 1/5 | 4/5 |

# IAQ Mold Report

## Data Detail

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

DSHS License No.: LAB0117
AIHA EMPAT ID: 102577

**Client :** Apex Titan, Inc. - Dallas
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This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

| **Sample ID:** | **4** | | | | **5** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location: | Room 102 | | | | Room 101 | | | | | | | |
| Media Expires On: | Sep 2017 | | | | Sep 2017 | | | | | | | |
| Notes Included: | | | | | | | | | | | | |
| Volume: | 150 | | | | 150 | | | | | | | |
| | raw ct. | MDL | spores/m³ | | raw ct. | MDL | spores/m³ | | | | | |
| Agaricales group | | | | | | | | | | | | |
| Alternaria | 1 | 6.67 | 7 | 2% | | | | | | | | |
| Ascospores | 3 | 6.67 | 20 | 6% | 5 | 6.67 | 33 | 7% | | | | |
| Aspergillus / Penicillium | 9 | 6.67 | 60 | 17% | 7 | 6.67 | 47 | 9% | | | | |
| Asteromyces | | | | | | | | | | | | |
| Basidiospores | 4 | 6.67 | 27 | 7% | 11 | 6.67 | 73 | 15% | | | | |
| Cercospora | | | | | | | | | | | | |
| Chaetomium | | | | | | | | | | | | |
| Cladosporium | 3 | 6.67 | 20 | 6% | 9 | 6.67 | 60 | 12% | | | | |
| Coprinus group | | | | | | | | | | | | |
| Curvularia | 5 | 6.67 | 33 | 9% | 5 | 6.67 | 33 | 7% | | | | |
| Diatrypaceae | | | | | | | | | | | | |
| Drechslera / Bipolaris group | 6 | 6.67 | 40 | 11% | 3 | 6.67 | 20 | 4% | | | | |
| Epicoccum | | | | | | | | | | | | |
| Fusarium | | | | | | | | | | | | |
| Ganoderma | | | | | | | | | | | | |
| Hyphal / Spore Fragments | 8 | 6.67 | 53 | 15% | 13 | 6.67 | 87 | 17% | | | | |
| Memnoniella | | | | | | | | | | | | |
| Myxomycete / Rust / Smut | 10 | 6.67 | 67 | 19% | 7 | 6.67 | 47 | 9% | | | | |
| Nigrospora | 4 | 6.67 | 27 | 7% | 5 | 6.67 | 33 | 7% | | | | |
| Oidium | | | | | | | | | | | | |
| Paecilomyces | | | | | 10 | 6.67 | 67 | 13% | | | | |
| Periconia | | | | | | | | | | | | |
| Peronospora | | | | | | | | | | | | |
| Pestalotia / Pestalotiopsis | | | | | | | | | | | | |
| Pithomyces | 1 | 6.67 | 7 | 2% | | | | | | | | |
| Pyricularia | | | | | | | | | | | | |
| Scopulariopsis | | | | | | | | | | | | |
| Spegazzinia | | | | | | | | | | | | |
| Stachybotrys | | | | | | | | | | | | |
| Tetraploa | | | | | | | | | | | | |
| Torula | | | | | | | | | | | | |
| Ulocladium / Stemphylium | | | | | | | | | | | | |
| Zygophiala | | | | | | | | | | | | |
| TOTALS | 54 | | 361 | 100% | 75 | | 500 | 100% | | | | |
| Analyst | Nina Mims | | | | Nina Mims | | | | | | | |
| Analysis Date | 10/3/2016 | | | | 10/3/2016 | | | | | | | |
| Debris Rating | 4 | | | | 3 | | | | | | | |
| Debris Composition | | | | | | | | | | | | |

# IAQ Mold Report

## Data Detail

2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

DSHS License No.: LAB0117
AIHA EMPAT ID: 102577

**Client :** Apex Titan, Inc. - Dallas
**Project :** Donald ES, Room 100 and 102
**Project # :** 725010727033
**Sample Type:** Spore Trap, Non-cultured
**Test Method:** Mold: ASTM D7391-09 - Standard Profile

**Lab Job No. :** 16F-12519
**Report Date :** 10/04/2016 11:11 AM
**Sample Date :** 09/30/2016
**Spore Trap Type:** Zefon - Air-O-Cell

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

| | | | |
|---|---|---|---|
| Fibers | 2/5 | 2/5 | |
| Inorganic/Other | 3/5 | 3/5 | |
| Insect Parts | 0/5 | 0/5 | |
| Pollen | 1/5 | 0/5 | |
| Skin/Dander | 4/5 | 3/5 | |

End of Data Detail section

# IAQ Mold Report

**Analytical Notes**

2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

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**NOTE: No abnormalities or exceptions noted during analysis. All samples suitable for analysis.**

**NOTE: No discernable field blanks were included with this sample set.**

## Methods

Method: ASTM D7391-09. A standard spore trap reading consists of a 30% reading for small spores; 100% of the sample is read for medium and large spores. A 100% reading is provided for containment samples, upon request, or otherwise as noted. Use final spore concentrations, not raw spore counts, for interpretation of results.

Calculation: Spores/cubic meter = (Raw spore count)*(MDL)
Note: MDL (Minimum Detection Limit) is calculated based upon 1 raw spore count.
Moody Labs recommends two significant figures for calculated values based on ASTM D7391-09.

This report must not be used by the customer to claim product certification, approval, or endorsement by AIHA, ISO, or any agency of the Federal Government.

## Debris Rating Key

0 - No linear trace detected
1 - Trace particulate/debris
2 - Light particulate/debris
3 - Moderate particulate/debris.
4 - Substantial particulate/debris
5 - Extensive particulate/debris
6 - Field blank
10 - Hold Sample
11 - Modified Analysis per Client Instructions

NOTE: Particulate/debris are defined as skin, fibers, pollen grains, insect parts, fungal and/or other non-fungal particles.

# IAQ Mold Report

## Analytical Notes

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

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AIHA LAP, LLC
ACCREDITED LABORATORY
ENVIRONMENTAL MICROBIOLOGY
ISO/IEC 17025:2005
WWW.AIHAACCREDITEDLABS.ORG
LAB # 102577

HUB
Statewide Historically Underutilized Business Program

TEXAS Department of State Health Services
License # LAB0117

Certified WBENC Women's Business Enterprise

End of Analytical Notes section
16F-12519

16F-12519-90C-5.

Lab Job # _____
Lab Job # _____
Lab Job # _____

# Moody Labs — Chain of Custody

*Please call in advance for immediate, after-hour, & weekend pricing & availability.*



**ASBESTOS PLM**
Bulk ☐ Immediate ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day
☐ **Analyze All** ☐ **Positive Stop**

**PCM Air (7400)**
☐ Immediate ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day

**TOTAL DUST(0500/0600)**
☐ 1 day ☐ 2 day

**ASBESTOS TEM**
Air AHERA Method ☐ Late Night* ☐ 6 hr ☐ 12 hr ☐ 24 hr
Air 7402 (Modified) ☐ 1 day ☐ 2 day ☐ 3 day
Bulk ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day
Water/Wipe/Micro Vac ☐ 1 day ☐ 2 day ☐ 3 day
**Analyze Blanks** ☐ **Yes** ☐ **No**
*Late night analysis surcharges apply

**MOLD**
Direct Exam ☐ Immediate ☐ 1 day ☐ 2 day
Standard Air ☐ Immediate ☐ 1 day ☒ 2 day
Expanded Air ☐ Immediate ☐ 1 day ☐ 2 day
Culture** ☐ 10-14 days
**Analyze Blanks** ☐ **Yes** ☐ **No**
**Turnaround of Culture Samples subject to Culture Growth**

**BACTERIA****
Colony Counts (CC) ☐ 3 day ☐ 5 day
CC + Gram Stain ☐ 3 day ☐ 5 day
Coliform & E. coli (P/A) ☐ 2-3 day
Legionella ☐ 14 days

**OTHER:** _____

**Billing Company / City:** Apex Titan Inc.
Submitter's Company: _____
Submitter's Name: Clint Jech
Project: Donald ES Room 100 & 102
**Contact Information:** Name: Clint Jech
E-mail Results to: Clint/Darren/Veronica
Invoice Address: Veronica

# of Samples: CS 4 5
Sample Date: 9/30/2016
Project #: 725010727033
Phone #: _____
Mobile #: (972) 989-1031
Fax #: _____
P.O. #: _____

*Please review paperwork and samples before submitting to lab. Unsealed / improperly packaged / damaged / expired samples or excessive administrative requests may incur additional fees*

Notes: _____

| Sample # | Sample Description | Vol. / Area (if applicable) | Location / Notes |
|---|---|---|---|
| 1 | Exterior, Southwest | 150 | T= 67.6 °H= 56.3 % |
| 2 | Exterior, South | 150 | T= 72.1 °H= 53.4 +/- |
| 3 | Room 100 | 150 | T= 73.2° H= 46.6 +/- M= 8-11 % |
| 4 | Room 102 | 150 | T= 72.1° H= 45.8 +/- M= 8-11 % |
| | | | Ceilings = Ceiling (100) (101) (102) Tile |
| | | | Walls = Sheetrock w/ Cork Board |
| | | | Floors = Carpet & Floor Tile |
| 5 | Room 101 | 150 | T= 72.1 H= 42.8 M= 8-12 % |

| Released By: | Date / Time: | Received By: | Date / Time: |
|---|---|---|---|
| Released By: | Date / Time: | Received By: | Date / Time: |
| | 9/30/2016 1130 | 9-30-2016 | 11:30 |

**ATTACHMENT 2**

Mold Services Definitions & Limitations/Standard of Care and Reliance

APEX

## Mold Services Definitions & Limitations

*"Mold" defined*. Mold is a general term used to describe various types of singled-celled naturally occurring biological organisms occurring worldwide. For purposes of this report the term "mold" is broadly defined to include any living or dead fungi or related products or parts, including spores, hyphae, and mycotoxins.

*Limited Scope of Mold Assessment*. The scope of Apex's mold assessment services as reflected in the Proposal and this report are limited in that (i) they were physically limited to certain portions of the building structure (e.g., the Client identified Investigation Areas); and (ii) limited by accessibility to building materials or components within the Investigation Area(s). In contrast to a Limited Assessment" is a comprehensive assessment, which involves destructive sampling methods and the scope of the assessment typically extending to the entire building structure.

*Time sensitive*. Mold assessments are essentially a *"snap shot in time,"* and the results are only relevant at the time of site reconnaissance. Because mold, when biologically active, is a living organism, its presence is influenced and controlled by environmental conditions. Mold assessments, therefore, are "time sensitive" in that the presence and concentration of mold and similar organisms in building structures or in the air is directly influenced by environmental conditions (such as humidity, moisture, nutrients and substrates), whether natural or caused by man, which conditions may vary significantly over relatively short periods of time.

*Methodologies.* Currently, mold assessment methodologies and protocols are governed by persuasive guidelines (rather than promulgated federal/state or local regulations). Presently, there is no data that supports a threshold limit or dose-response relationship for exposure to mold aeroallergens, individual pathogens, opportunistic pathogens and/or mycotoxins. The Occupational Safety and Health Administration (OSHA), the National Institute of Occupational Safety and Health (NIOSH) and other non-governmental associations, have not yet established permissible exposure limits (PELs), recommended exposure limits (RELs), or other limit values for aeroallergens. Because no limit values presently exist, Apex will not and cannot represent that the site contains no harmful microbes, mold, fungi, or their metabolites, or other latent conditions beyond those identified by the limited scope of this mold assessment.

*Findings limited*. Findings from a limited mold assessment are limited because of the nature of the information obtained (e.g., visual reconnaissance of readily accessible areas of building structures, interview information, anecdotal information, and limited sampling data derived from one or more specific sampling events). Apex cannot warrant the accuracy of prior or subsequent information/data, reports and services performed by other firms at the Site. Apex assumes no responsibility or liability for errors in information or data provided by or through the client or third party sources. Apex's services are not to be construed as legal or medical interpretation or advice.

*Moisture Intrusion Limitation.* Apex performs mold assessment services and is not a moisture intrusion, HVAC, roofing, plumbing or building envelope specialist. However, during the course of conducting its mold assessment services, Apex will report observed areas of apparent moisture intrusion. Apex does not and will not investigate the cause or causes of such observed moisture intrusion. In the event apparent moisture intrusion is observed, Apex will recommend

that the client contact a specialist (i.e., plumbing contractor, building envelope specialist, HVAC contractor, water intrusion specialist, etc.) to assist the client in determining the specific cause or causes of the moisture intrusion and remedial options.

**Standard of Care**
Apex performed its Services in accordance with generally accepted practices of the profession undertaken in similar services at the same time and in the same geographical area. No other warranties, expressed or implied, apply to the Services hereunder or this report.

**Reliance**
Apex's proposal for this project, services and this report have been prepared on behalf of and for the exclusive use of Lewisville Independent School District solely for their use and reliance in assessing the presence of mold in the Investigation Areas of the site. Lewisville Independent School District is the only party to which Apex explained the risks and limitations of the services and was solely involved in shaping the scope of services. Accordingly, reliance on this report by any other party may involve assumptions leading to an unintended interpretation of findings and opinions. With the consent of the client, Apex may offer reliance to third parties or contract with other parties to develop findings and opinions related to such party's unique risk management concerns. Notwithstanding the foregoing, reliance by any and all third parties upon the proposal, the Services or this report shall be limited in the aggregate to all relying parties to the fair market value of the Services provided by Apex.