

**DATE:** October 1, 2014

**TO:** Justin Gilbreath, Assistant Principal

**SUBJECT:** Huffines MS - IAQ - Air Test report - Room 1345

On Friday 9/19, Apex-Titan Air tested Room 1345. It is typically assumed that indoor spore levels in an area with filtered or air conditioned air, and activity levels associated with schools average 10% to 40% of the outdoor levels. Data from the airborne fungi sampling indicated that the total indoor concentration of mold/fungi in Room 1345, was **40.2%** of the outdoor levels. Utilizing this theory, the indoor concentrations are slightly above the acceptable guidelines for areas with filtered air or air conditioning. **I am requesting Custodial Services to Shampoo the carpet in Room 1345, on Friday night, October 3, 2014. Then, next week, we will have the room retested.** If you have any questions, please call me.

Thanks,  
Paul

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

**DATE:** October 15, 2014

**TO:** Justin Gilbreath, Assistant Principal

**SUBJECT:** Huffines MS - IAQ - Re-test Results report-Room 1345

On Tuesday 10/14, Apex-Titan Air tested Room 1345 Retest. It is typically assumed that indoor spore levels in an area with filtered or air conditioned air, and activity levels associated with schools average 10% to 40% of the outdoor levels. Data from the airborne fungi sampling indicated that the total indoor concentration of mold/fungi in Room 1345 Retest, was **19.1%** of the outdoor levels. Utilizing this theory, the indoor concentrations are 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



October 17, 2014

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

Re: Limited Mold Assessment Services – Retest  
Huffines Middle School  
Room 1345  
1440 N Valley Parkway  
Lewisville, Texas  
Apex Project No. 7210114H233A  
LISD PO No. 91505963-00

### **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 Huffines Middle School located at 1440 N Valley Parkway in Lewisville, 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 October 10, 2014. 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 room 1345. 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. P0114H1390) dated October 10, 2014. 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 October 10, 2014 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 room was reported as 72.5 degrees Fahrenheit while relative humidity was reported as 34.5 percent. Temperature readings collected outside the building ranged from 85.2 to 86.3 degrees Fahrenheit while outside relative humidity ranged from 45.4 to 52.6 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 room was ranged from 7 to 11% which is considered normal by the manufacturer.

### **Air Monitoring Results**

Apex collected one (1) sample from the the investigation area and two (2) samples from the exterior of the building. The microbial samples were analyzed by Steve Moody Micro Services, Inc. (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 room was 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 area was reported as 628 counts/m<sup>3</sup>, while the exterior level ranged from 2,303 to 3,291 counts/m<sup>3</sup>.

One (1) 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 1345 reported Nigrospora as 20 counts/m<sup>3</sup> while exterior levels were reported as 13 counts/m<sup>3</sup>.

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.

If you have any questions regarding this report or if we can assist you with any other matter, please contact the undersigned at (214) 350-5469.

Sincerely,  
**Apex TITAN, Inc.**



Darren G. Bowden  
Senior Program Manager  
Industrial Hygiene Services  
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

Steve Moody Micro Services, LLC

2051 Valley View Lane

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

## Summary

DSHS License No.: LAB0117

AIHA EMPAT ID: 102577

**Client :** Apex TITAN, Inc. - Dallas, TX

**Lab Job No.** 14F-12815

**Project :** Huffines MS Room 1345 Retest

**Report Date** 10/14/2014 3:23 PM

**Project # :** 7210114H233A

**Sample Date :** 10/10/2014

**Sample Type:** Spore Trap, Non-cultured

**Spore Trap Type:** Zefon - Air-O-Cell

**Test Method:** Mold: ASTM D7391-09 - Standard Profile

Page 1 of 3

On 10/10/2014, three (3) samples were submitted by Clint Jech of Apex TITAN, Inc. - Dallas, TX (located at 2351 W. NW Highway #3321, Dallas, TX 75220) 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	75	Exterior, East	Basidiospores Aspergillus / Penicillium Cladosporium Hyphal / Spore Fragments Ascospores Myxomycete / Rust / Smut Paecilomyces Drechslera / Bipolaris group Coprinus group Alternaria Agrocybe Pyricularia Ganoderma Fusarium Curvularia  <div style="text-align: right;">Total:</div>	893 27% 880 27% 853 26% 240 7% 93 3% 67 2% 53 2% 53 2% 40 1% 40 1% 27 <1% 13 <1% 13 <1% 13 <1% 13 <1%  3291 100%

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Sample Number	Volume (liters)	Sample Description	Identification	Concentration spores/cubic meter
2	75	Exterior, Northwest	Basidiospores	773 34%
			Cladosporium	453 20%
			Ascospores	293 13%
			Aspergillus / Penicillium	213 9%
			Agrocybe	107 5%
			Hyphal / Spore Fragments	93 4%
			Coprinus group	93 4%
			Myxomycete / Rust / Smut	93 4%
			Paecilomyces	53 2%
			Drechslera / Bipolaris group	53 2%
			Ganoderma	40 2%
			Nigrospora	13 <1%
			Cercospora	13 <1%
			Alternaria	13 <1%
			Total:	2303 100%
3	150	Room 1345	Basidiospores	107 17%
			Aspergillus / Penicillium	107 17%
			Cladosporium	100 16%
			Hyphal / Spore Fragments	87 14%
			Ascospores	67 11%
			Myxomycete / Rust / Smut	47 7%
			Drechslera / Bipolaris group	47 7%
			Nigrospora	20 3%
			Ganoderma	20 3%
			Curvularia	13 2%
			Alternaria	13 2%
			Total:	628 100%



# IAQ Mold Report

Steve Moody Micro Services, LLC  
2051 Valley View Lane  
Farmers Branch, TX 75234 Phone: (972) 241-8460

## Summary

DSHS License No.: LAB0117  
AIHA EMPAT ID: 102577

**Client :** Apex TITAN, Inc. - Dallas, TX **Lab Job No.** 14F-12815  
**Project :** Huffines MS Room 1345 Retest **Report Date** 10/14/2014 3:23 PM  
**Project # :** 7210114H233A **Sample Date :** 10/10/2014  
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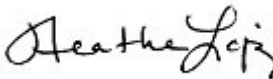
Sample Number	Volume (liters)	Sample Description	Identification	Concentration spores/cubic meter

Results may not be reported except in full. Data contained in this test report relates only to the samples tested. This report does not express or imply interpretation of the results contained herein. Interpretation should be made by a qualified professional.


Steve Moody Micro Services assumes no responsibility for the manner in which these samples were collected or handled prior to being received at this laboratory. SMMS assumes no responsibility for the qualifications of personnel performing sampling and/or interpretations of this data.

Analyst(s): Rebecca Lutz

Lab Manager : Heather Lopez

Approved Signatory : 

Lab Director : Bruce Crabb

Approved Signatory : 

Thank you for choosing Steve Moody Micro Services

# IAQ Mold Report

Steve Moody Micro Services, LLC  
 2051 Valley View Lane  
 Farmers Branch, TX 75234 Phone: (972) 241-8460

## Data Detail

DSHS License No.: LAB0117  
 AIHA EMPAT ID: 102577

**Client :** Apex TITAN, Inc. - Dallas, TX **Lab Job No. :** 14F-12815  
**Project :** Huffines MS Room 1345 Retest **Report Date :** 10/14/2014 3:23 PM  
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Sample ID:	1				2				3			
Location:	Exterior, East				Exterior, Northwest				Room 1345			
Media Expires On:	Feb 2015				Feb 2015				Feb 2015			
Notes Included:												
Volume:	75				75				150			
	raw ct.	MDL	spores/m <sup>3</sup>		raw ct.	MDL	spores/m <sup>3</sup>		raw ct.	MDL	spores/m <sup>3</sup>	
Agrocyebe	2	13.33	27	<1%	8	13.33	107	5%				
Alternaria	3	13.33	40	1%	1	13.33	13	<1%	2	6.67	13	2%
Ascospores	7	13.33	93	3%	22	13.33	293	13%	10	6.67	67	11%
Aspergillus / Penicillium	66	13.33	880	27%	16	13.33	213	9%	16	6.67	107	17%
Basidiospores	67	13.33	893	27%	58	13.33	773	34%	16	6.67	107	17%
Cercospora					1	13.33	13	<1%				
Chaetomium												
Cladosporium	64	13.33	853	26%	34	13.33	453	20%	15	6.67	100	16%
Coprinus group	3	13.33	40	1%	7	13.33	93	4%				
Curvularia	1	13.33	13	<1%					2	6.67	13	2%
Drechslera / Bipolaris group	4	13.33	53	2%	4	13.33	53	2%	7	6.67	47	7%
Fusarium	1	13.33	13	<1%								
Ganoderma	1	13.33	13	<1%	3	13.33	40	2%	3	6.67	20	3%
Hyphal / Spore Fragments	18	13.33	240	7%	7	13.33	93	4%	13	6.67	87	14%
Memnoniella												
Myxomycete / Rust / Smut	5	13.33	67	2%	7	13.33	93	4%	7	6.67	47	7%
Nigrospora					1	13.33	13	<1%	3	6.67	20	3%
Paecilomyces	4	13.33	53	2%	4	13.33	53	2%				
Pyricularia	1	13.33	13	<1%								
Stachybotrys												
<b>TOTALS</b>	247		3291	100%	173		2303	100%	94		628	100%
Analyst	Rebecca Lutz				Rebecca Lutz				Rebecca Lutz			
Analysis Date	10/14/2014				10/14/2014				10/14/2014			
Debris Rating	3				3				3			
Debris Composition												
Fibers	1/5				1/5				2/5			
Inorganic/Other	3/5				3/5				2/5			
Insect Parts	0/5				2/5				0/5			
Pollen	2/5				3/5				1/5			
Skin/Dander	1/5				3/5				3/5			

# IAQ Mold Report

Steve Moody Micro Services, LLC

Analytical Notes

DSHS License No.: LAB0117

2051 Valley View Lane

AIHA EMPAT ID: 102577

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

**Client :** Apex TITAN, Inc. - Dallas, TX

**Lab Job No. :** 14F-12815

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Page 1 of 2

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.

**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: Categorization and Quantification of Airborne Fungal Structures in an Inertial Impaction Sample by Optical Microscopy.

Calculation: Spores/cubic meter = (Raw spore count)\*(MDL)

Note: MDL (Minimum Detection Limit) is calculated based upon 1 raw spore count.

Steve Moody Micro Services 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 debris detected.

1 - Trace debris.

2 - Light debris.

3 - Moderate debris.

4 - Substantial debris.

5 - Extensive debris.

6 - Field blank.

10 - Hold Sample

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

# IAQ Mold Report

Steve Moody Micro Services, LLC

2051 Valley View Lane

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

## Analytical Notes

DSHS License No.: LAB0117

AIHA EMPAT ID: 102577

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LAB # 102577



# IAQ Mold Report

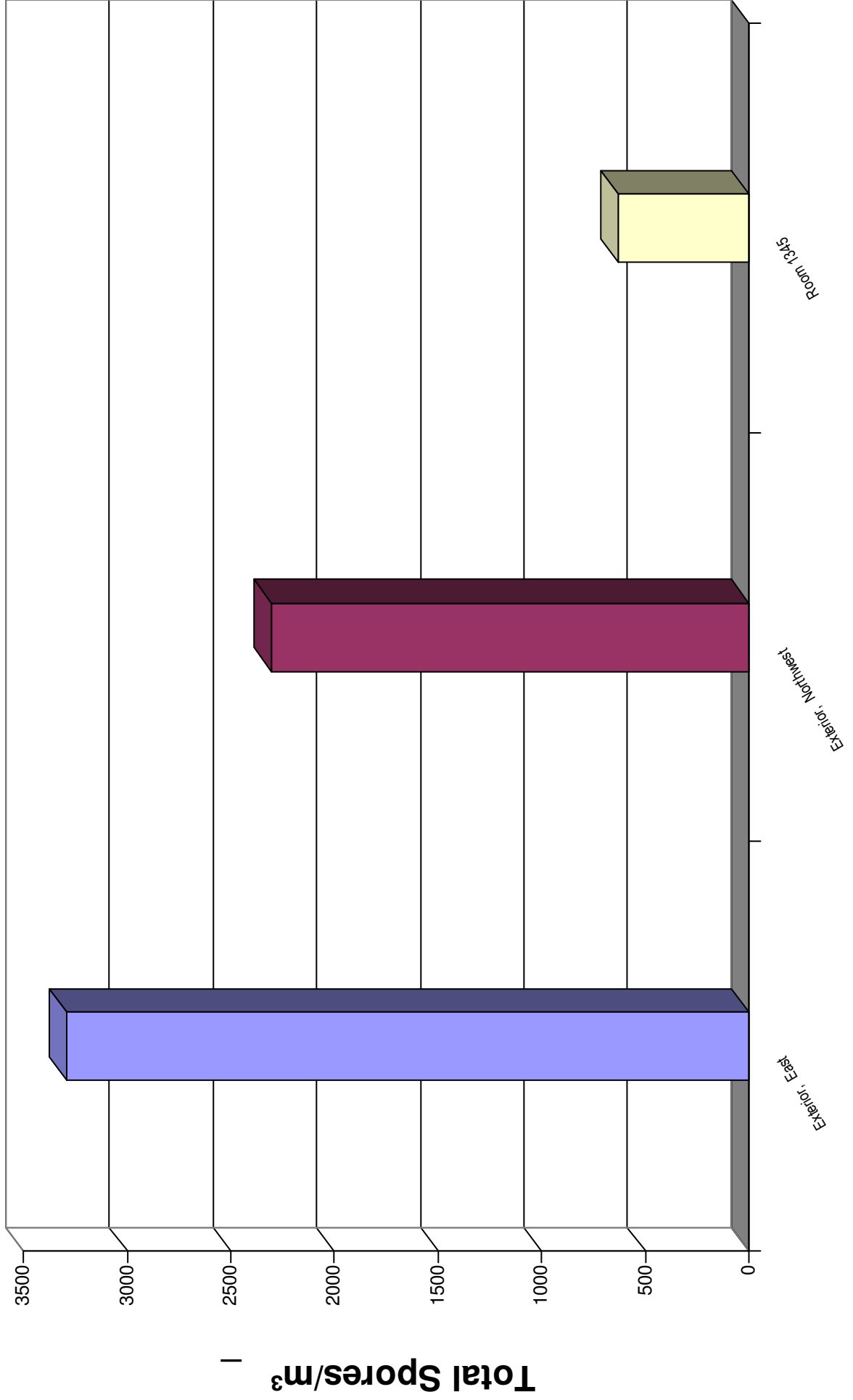
## Supplemental Overview

Steve Moody Micro Services, LLC  
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, TX  
**Project :** Huffines MS Room 1345 Retest  
**Project # :** 7210114H233A

**Lab Job No.** 14F-12815  
**Report Date** 10/14/2014 3:23 PM  
**Sample Date :** 10/10/2014





Chain of Custody

Lab Job # HF-12815
Lab Job #
Lab Job #

\*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 [ ] 6 hr [ ] 12 hr [ ] 24 hr
Air 7402 (Modified) [ ] 1 day [ ] 2 day [ ] 3 day
Bulk/Wipe/Micro Vac [ ] 1 day [ ] 2 day [ ] 3 day [ ] 5 day
Water [ ] 1 day [ ] 2 day [ ] 3 day
Analyze Blanks [ ] Yes [ ] No

MOLD

Direct Exam [ ] Immediate [ ] 1 day [ ] 2 day
Standard Air [ ] Immediate [ ] 1 day [X] 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\*

Total Colony Counts (CC) [ ] 3 day [ ] 5 day
CC + Gram Stain [ ] 3 day [ ] 5 day
Total Coliform & E. coli (P/A) [ ] 2-3 day

OTHER:

Billing Company / City: Apex Titan (Dallas South)
Submitter's Company:
Submitter's Name: Clint Tech
Project: Huffins MS Room 1345 Re-test
Contact Information: Name: Clint Tech
E-mail Results to: Clint/Burton/Vernicia
Invoice Address: Veronica

# of Samples: 3
Sample Date: 10/10/2014
Project #: 721014H255A
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:

Table with 4 columns: Sample #, Sample Description, Vol. / Area (if applicable), Location / Notes. Contains 3 rows of data with handwritten notes on location.

Released By: [Signature] Date / Time: 10/10/14 16:50
Received By: [Signature] Date / Time: 10/10/14 4:57 pm

## **ATTACHMENT 2**

Mold Services Definitions & Limitations/Standard of Care and Reliance



## **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 (and the Texas Mold Assessment & Remediation Rules), 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 in Texas 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.

*Texas Licensing Requirements.* Apex (and/or its personnel) will render the services set forth in this proposal in the capacity of a Texas licensed Mold Assessor. Apex is not licensed as a Mold Remediation Contractor and does not perform mold remediation. As of January 1, 2005, Texas law has required that Mold Assessors and Mold Remediation Contractors be licensed.

*Mold Remediation Certificate.* For mold remediation projects (above certain size thresholds), applicable Texas law (i.e., Texas Occupation Code Section 1958.54 and T.A.C. Section 295.397 (the Texas Mold Assessment and Remediation Rules), requires that a "Certificate of Mold Remediation" be issued by the Mold Remediation Contractor upon successful completion of the project. This certificate must be provided to property owners no later than the 10<sup>th</sup> day after the date on which the mold remediation is completed at a property. The Mold Remediation Certificate issued by the Mold Remediation Contractor must include a certification by the Mold Assessor that the mold remediation project has been successfully completed in accordance with the mold remediation protocol.

Be advised that Apex's issuance of a Mold Remediation Certificate upon successful completion of a Mold Remediation project does not mean, warrant or otherwise guarantee that mold will not be subsequently found in any portion of the Investigation Area or the Site. In the event that Apex is engaged to render services in connection with a mold remediation project, Apex will require *Client to provide to Apex a signed certificate prepared by Client's moisture intrusion specialist or appropriate contractor stating that all sources of moisture which resulted in the presence of mold in the Investigation Area have been fully remediated and corrected.*

### **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.



September 25, 2014

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

Re: Limited Mold Assessment Services  
Huffines Middle School  
Room 1345  
1440 N Valley Parkway  
Lewisville, Texas  
Apex Project No. 7210114H233  
LISD PO No. 91501591-00

### **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 the Huffines Middle School located at 1440 N Valley Parkway in Lewisville, 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 19, 2014. 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 room 1345. 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. P0114H1355) dated September 12, 2014. 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 19, 2014 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 room was reported as 76.1 degrees Fahrenheit while relative humidity was reported as 36.4 percent. Temperature readings collected outside the building ranged from 82.7 to 84.6 degrees Fahrenheit while outside relative humidity ranged from 52.6 to 60 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 were ranged from 8 to 11% which is considered normal by the manufacturer.

### **Air Monitoring Results**

Apex collected one (1) sample from the interior of the investigation area and two (2) samples from the exterior of the building. The microbial samples were analyzed by Steve Moody Micro Services, Inc. (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 area was reported as 6,598 counts/m<sup>3</sup>, while the exterior level ranged from 7,638 to 16,422 counts/m<sup>3</sup>.

One (1) type of mold was identified at a higher concentration within the investigation area as compared to the samples collected from the exterior of the building. Air sample collected within Room 1345 reported *Curvularia* as 514 counts/m<sup>3</sup> while exterior levels were reported as 227 counts/m<sup>3</sup>.

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.

If you have any questions regarding this report or if we can assist you with any other matter, please contact the undersigned at (214) 350-5469.

Sincerely,  
**Apex TITAN, Inc.**



Darren G. Bowden  
Senior Program Manager  
Industrial Hygiene Services  
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

Steve Moody Micro Services, LLC

2051 Valley View Lane

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

## Summary

DSHS License No.: LAB0117

AIHA EMPAT ID: 102577

**Client :** Apex TITAN, Inc. - Dallas, TX

**Lab Job No.** 14F-12815

**Project :** Huffines MS Room 1345 Retest

**Report Date** 10/14/2014 3:23 PM

**Project # :** 7210114H233A

**Sample Date :** 10/10/2014

**Sample Type:** Spore Trap, Non-cultured

**Spore Trap Type:** Zefon - Air-O-Cell

**Test Method:** Mold: ASTM D7391-09 - Standard Profile

Page 1 of 3

On 10/10/2014, three (3) samples were submitted by Clint Jech of Apex TITAN, Inc. - Dallas, TX (located at 2351 W. NW Highway #3321, Dallas, TX 75220) 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	75	Exterior, East	Basidiospores Aspergillus / Penicillium Cladosporium Hyphal / Spore Fragments Ascospores Myxomycete / Rust / Smut Paecilomyces Drechslera / Bipolaris group Coprinus group Alternaria Agrocybe Pyricularia Ganoderma Fusarium Curvularia	893 27% 880 27% 853 26% 240 7% 93 3% 67 2% 53 2% 53 2% 40 1% 40 1% 27 <1% 13 <1% 13 <1% 13 <1% 13 <1%
			Total:	3291 100%

# IAQ Mold Report

Steve Moody Micro Services, LLC

2051 Valley View Lane

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

## Summary

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Page 2 of 3

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Sample Number	Volume (liters)	Sample Description	Identification	Concentration spores/cubic meter
2	75	Exterior, Northwest	Basidiospores	773 34%
			Cladosporium	453 20%
			Ascospores	293 13%
			Aspergillus / Penicillium	213 9%
			Agrocybe	107 5%
			Hyphal / Spore Fragments	93 4%
			Coprinus group	93 4%
			Myxomycete / Rust / Smut	93 4%
			Paecilomyces	53 2%
			Drechslera / Bipolaris group	53 2%
			Ganoderma	40 2%
			Nigrospora	13 <1%
			Cercospora	13 <1%
			Alternaria	13 <1%
			Total:	2303 100%
3	150	Room 1345	Basidiospores	107 17%
			Aspergillus / Penicillium	107 17%
			Cladosporium	100 16%
			Hyphal / Spore Fragments	87 14%
			Ascospores	67 11%
			Myxomycete / Rust / Smut	47 7%
			Drechslera / Bipolaris group	47 7%
			Nigrospora	20 3%
			Ganoderma	20 3%
			Curvularia	13 2%
			Alternaria	13 2%
			Total:	628 100%

# IAQ Mold Report

Steve Moody Micro Services, LLC  
2051 Valley View Lane  
Farmers Branch, TX 75234 Phone: (972) 241-8460

## Summary

DSHS License No.: LAB0117  
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Sample Number	Volume (liters)	Sample Description	Identification	Concentration spores/cubic meter

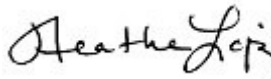
Results may not be reported except in full. Data contained in this test report relates only to the samples tested. This report does not express or imply interpretation of the results contained herein. Interpretation should be made by a qualified professional.

Steve Moody Micro Services assumes no responsibility for the manner in which these samples were collected or handled prior to being received at this laboratory. SMMS assumes no responsibility for the qualifications of personnel performing sampling and/or interpretations of this data.

Analyst(s): Rebecca Lutz

Lab Manager : Heather Lopez

Approved Signatory :



Lab Director : Bruce Crabb

Approved Signatory :



Thank you for choosing Steve Moody Micro Services



# IAQ Mold Report

Steve Moody Micro Services, LLC  
 2051 Valley View Lane  
 Farmers Branch, TX 75234 Phone: (972) 241-8460

## Data Detail

DSHS License No.: LAB0117  
 AIHA EMPAT ID: 102577

**Client :** Apex TITAN, Inc. - Dallas, TX **Lab Job No. :** 14F-12815  
**Project :** Huffines MS Room 1345 Retest **Report Date :** 10/14/2014 3:23 PM  
**Project # :** 7210114H233A **Sample Date :** 10/10/2014  
**Sample Type:** Spore Trap, Non-cultured **Spore Trap Type:** Zefon - Air-O-Cell  
**Test Method:** Mold: ASTM D7391-09 - Standard Profile Page 1 of 1

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, East				Exterior, Northwest				Room 1345			
Media Expires On:	Feb 2015				Feb 2015				Feb 2015			
Notes Included:												
Volume:	75				75				150			
	raw ct.	MDL	spores/m <sup>3</sup>		raw ct.	MDL	spores/m <sup>3</sup>		raw ct.	MDL	spores/m <sup>3</sup>	
Agrocyebe	2	13.33	27	<1%	8	13.33	107	5%				
Alternaria	3	13.33	40	1%	1	13.33	13	<1%	2	6.67	13	2%
Ascospores	7	13.33	93	3%	22	13.33	293	13%	10	6.67	67	11%
Aspergillus / Penicillium	66	13.33	880	27%	16	13.33	213	9%	16	6.67	107	17%
Basidiospores	67	13.33	893	27%	58	13.33	773	34%	16	6.67	107	17%
Cercospora					1	13.33	13	<1%				
Chaetomium												
Cladosporium	64	13.33	853	26%	34	13.33	453	20%	15	6.67	100	16%
Coprinus group	3	13.33	40	1%	7	13.33	93	4%				
Curvularia	1	13.33	13	<1%					2	6.67	13	2%
Drechslera / Bipolaris group	4	13.33	53	2%	4	13.33	53	2%	7	6.67	47	7%
Fusarium	1	13.33	13	<1%								
Ganoderma	1	13.33	13	<1%	3	13.33	40	2%	3	6.67	20	3%
Hyphal / Spore Fragments	18	13.33	240	7%	7	13.33	93	4%	13	6.67	87	14%
Memnoniella												
Myxomycete / Rust / Smut	5	13.33	67	2%	7	13.33	93	4%	7	6.67	47	7%
Nigrospora					1	13.33	13	<1%	3	6.67	20	3%
Paecilomyces	4	13.33	53	2%	4	13.33	53	2%				
Pyricularia	1	13.33	13	<1%								
Stachybotrys												
<b>TOTALS</b>	247		3291	100%	173		2303	100%	94		628	100%
Analyst	Rebecca Lutz				Rebecca Lutz				Rebecca Lutz			
Analysis Date	10/14/2014				10/14/2014				10/14/2014			
Debris Rating	3				3				3			
Debris Composition												
Fibers	1/5				1/5				2/5			
Inorganic/Other	3/5				3/5				2/5			
Insect Parts	0/5				2/5				0/5			
Pollen	2/5				3/5				1/5			
Skin/Dander	1/5				3/5				3/5			

# IAQ Mold Report

Steve Moody Micro Services, LLC

Analytical Notes

DSHS License No.: LAB0117

2051 Valley View Lane

AIHA EMPAT ID: 102577

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

**Client :** Apex TITAN, Inc. - Dallas, TX

**Lab Job No. :** 14F-12815

**Project :** Huffines MS Room 1345 Retest

**Report Date :** 10/14/2014 3:23 PM

**Project # :** 7210114H233A

**Sample Date :** 10/10/2014

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**Spore Trap Type:** Zefon - Air-O-Cell

**Test Method:** Mold: ASTM D7391-09 - Standard Profile

Page 1 of 2

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.

**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: Categorization and Quantification of Airborne Fungal Structures in an Inertial Impaction Sample by Optical Microscopy.

Calculation: Spores/cubic meter = (Raw spore count)\*(MDL)

Note: MDL (Minimum Detection Limit) is calculated based upon 1 raw spore count.

Steve Moody Micro Services 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 debris detected.

1 - Trace debris.

2 - Light debris.

3 - Moderate debris.

4 - Substantial debris.

5 - Extensive debris.

6 - Field blank.

10 - Hold Sample

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

# IAQ Mold Report

Steve Moody Micro Services, LLC

2051 Valley View Lane

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

## Analytical Notes

DSHS License No.: LAB0117

AIHA EMPAT ID: 102577

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Page 2 of 2

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LAB # 102577



# IAQ Mold Report

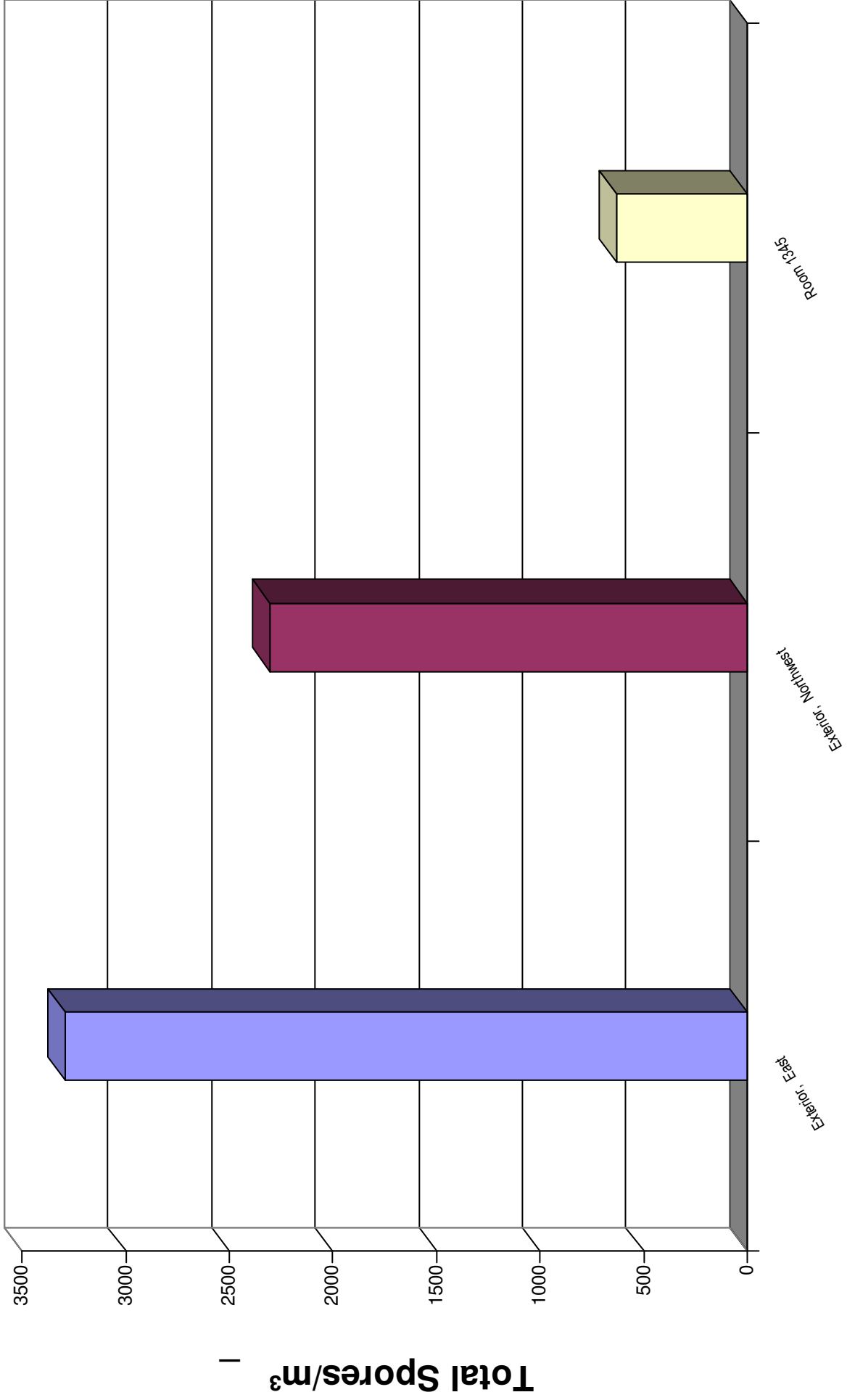
## Supplemental Overview

Steve Moody Micro Services, LLC  
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, TX  
**Project :** Huffines MS Room 1345 Retest  
**Project # :** 7210114H233A

**Lab Job No.** 14F-12815  
**Report Date** 10/14/2014 3:23 PM  
**Sample Date :** 10/10/2014





Chain of Custody

Lab Job # HF-12815
Lab Job #
Lab Job #

\*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 [ ] 6 hr [ ] 12 hr [ ] 24 hr
Air 7402 (Modified) [ ] 1 day [ ] 2 day [ ] 3 day
Bulk/Wipe/Micro Vac [ ] 1 day [ ] 2 day [ ] 3 day [ ] 5 day
Water [ ] 1 day [ ] 2 day [ ] 3 day
Analyze Blanks [ ] Yes [ ] No

MOLD

Direct Exam [ ] Immediate [ ] 1 day [ ] 2 day
Standard Air [ ] Immediate [ ] 1 day [X] 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\*

Total Colony Counts (CC) [ ] 3 day [ ] 5 day
CC + Gram Stain [ ] 3 day [ ] 5 day
Total Coliform & E. coli (P/A) [ ] 2-3 day

OTHER:

Billing Company / City: Apex Titan (Dallas South)
Submitter's Company:
Submitter's Name: Clint Jech
Project: Huffins MS Room 1345 Re-test
Contact Information: Name: Clint Jech
E-mail Results to: Clint/Burton/Veronica
Invoice Address: Veronica

# of Samples: 3
Sample Date: 10/10/2014
Project #: 721014H255A
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:

Table with 4 columns: Sample #, Sample Description, Vol. / Area (if applicable), Location / Notes. Contains 3 rows of data with handwritten notes on location and materials.

Released By: [Signature] Date / Time: 10/10/14 16:50
Received By: [Signature] Date / Time: 10/10/14 4:57 pm

## **ATTACHMENT 2**

Mold Services Definitions & Limitations/Standard of Care and Reliance



## **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 (and the Texas Mold Assessment & Remediation Rules), 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 in Texas 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.

*Texas Licensing Requirements.* Apex (and/or its personnel) will render the services set forth in this proposal in the capacity of a Texas licensed Mold Assessor. Apex is not licensed as a Mold Remediation Contractor and does not perform mold remediation. As of January 1, 2005, Texas law has required that Mold Assessors and Mold Remediation Contractors be licensed.

*Mold Remediation Certificate.* For mold remediation projects (above certain size thresholds), applicable Texas law (i.e., Texas Occupation Code Section 1958.54 and T.A.C. Section 295.397 (the Texas Mold Assessment and Remediation Rules), requires that a "Certificate of Mold Remediation" be issued by the Mold Remediation Contractor upon successful completion of the project. This certificate must be provided to property owners no later than the 10<sup>th</sup> day after the date on which the mold remediation is completed at a property. The Mold Remediation Certificate issued by the Mold Remediation Contractor must include a certification by the Mold Assessor that the mold remediation project has been successfully completed in accordance with the mold remediation protocol.

Be advised that Apex's issuance of a Mold Remediation Certificate upon successful completion of a Mold Remediation project does not mean, warrant or otherwise guarantee that mold will not be subsequently found in any portion of the Investigation Area or the Site. In the event that Apex is engaged to render services in connection with a mold remediation project, Apex will require *Client to provide to Apex a signed certificate prepared by Client's moisture intrusion specialist or appropriate contractor stating that all sources of moisture which resulted in the presence of mold in the Investigation Area have been fully remediated and corrected.*

### **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.