

**DATE:** May 13, 2014

**TO:** Patricia Cuckler, Principal

**SUBJECT:** Hedrick ES - IAQ - Air Test Results - Room 206

On Wednesday 5/7, SWG Air tested the Room 206. 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 the Room 206, was 29.6% of the outdoor levels. Utilizing this theory, the indoor concentrations are within the acceptable guidelines for areas with filtered air or air conditioning. Even though the full count is within the 40%, there were 2 spores of Stachybotrys & 2 spores of Chaetomium. I am requesting Custodial to Shampoo the carpet and we will retest. If you have any questions, please call me.

Thanks, Paul

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



**DATE:** May 6, 2014

**TO:** Patricia Cuckler, Principal

**SUBJECT:** Hedrick ES - IAQ - Initial Contact - Room 206

Yesterday 5/5, I received your E-mail: "I have a parent request to check the air quality in room 206. Previously in the year the room had a substantial roof leak." I set up Work Order: #185519. This morning 5/6, I inspected Room 206. No noticeable water intrusions. I am putting in a P.O. request to Air Test Room 206. This should be done by the end of this week. If you have any questions, please contact me. Thanks, Paul

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



May 9, 2014

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

Re: Limited Mold Assessment Services

Hedrick Elementary School

Room 206

1532 Bellaire Boulevard

Lewisville, Texas

Project No. 7210114H119 LISD PO# 91402088-00

#### **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 Hedrick Elementary School located at 1532 Bellaire Boulevard 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. Darren G. Bowden, a State of Texas licensed Mold Assessment Consultant (Lic. No. MAC0321) on May 7, 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 206. 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. P0114H1184) dated May 6, 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 May 7, 2014 by Mr. Darren G. Bowden. Apex's visual reconnaissance of the Investigation areas revealed the following:

#### **Temperature and Relative Humidity**

Temperature readings collected inside the room was reported as 77.4 degrees Fahrenheit while relative humidity was reported as 31.5 percent. Temperature readings collected outside the building ranged from 80.6 to 82.1 degrees Fahrenheit while outside relative humidity ranged from 56.2 to 57.4 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 6 to 8% 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 2,453 counts/m³, while exterior levels ranged from 6,346 to 8,278 counts/m³.

Six (6) 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 206 reported Alternia as 87 counts/m³ while exterior levels were reported as 67 counts/m³. Agaricus/Agrocybe was reported as 20 counts/m³, Curvularia was reported as 67 counts/m³, Chaetomium was reported as 13 counts/m³, Drechslera/Biopolaris Group was reported as 13 counts/m³ and Stachybotrys was reported as 13 counts/m³ while no exterior levels where reported.

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. 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 (214) 350-5469.

Sincerely,

Apex TITAN, Inc.

Darren G. Bowden

Senior Program Manager Industrial Hygiene Services

**Texas Mold Assessment Consultant** 

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Lic. No. MAC0321

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



### **ATTACHMENT 1**

Analytical Results/Chain of Custody



Steve Moody Micro Services, LLC

2051 Valley View Lane

DSHS License No.: LAB0117

AIHA EMPAT ID: 102577

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

Client: Apex TITAN, Inc. - Dallas, TX Lab Job No. 14F-05560

Project: Hedrick ES Room 206 Report Date 05/09/2014 9:24 AM

**Project #:** 7210114H119 **Sample Date:** 05/07/2014

Sample Type: Spore Trap, Non-cultured Spore Trap Type: Zefon - Air-O-Cell

**Test Method:** Mold: ASTM D7391-09 - Standard Profile Page 1 of 2

On 5/7/2014, three (3) samples were submitted by Darren Bowden 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	ı	ntration ibic meter
1	150	Rm 206 * See Analytical Notes report for further details	Cladosporium Aspergillus / Penicillium Basidiospores Hyphal / Spore Fragments Alternaria Curvularia Myxomycete / Periconia / Rust / Smut Ascospores Agaricus / Agrocybe Stachybotrys Drechslera / Bipolaris group Chaetomium	834 680 340 300 87 67 53 33 20 13 13	34% 28% 14% 12% 4% 3% 2% 1% <1% <1% <1%
2 75	75 Outside * See Analytical Notes report for further details	Total:  Basidiospores Cladosporium Aspergillus / Penicillium Hyphal / Spore Fragments	2453 2333 1760 1146 720	100% 37% 28% 18% 11%	
			Ascospores Myxomycete / Periconia / Rust / Smut Fusarium Pithomyces Epicoccum	173 107 53 27 27	3% 2% <1% <1% <1%
			Total:	6346	100%

Steve Moody Micro Services, LLC

2051 Valley View Lane

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Sample Number	Volume (liters)	Sample Description	Identification		ntration
3	75	Outside * See Analytical Notes report for further details	Cladosporium Basidiospores Aspergillus / Penicillium Ascospores Hyphal / Spore Fragments Myxomycete / Periconia / Rust / Smut Alternaria Epicoccum Cercospora / Pseudocercospora Fusarium	3013 2679 1266 587 440 173 67 27 13	36% 32% 15% 7% 5% 2% <1% <1% <1%
			Total:	8278	100%

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): Rob Greene

Lab Director: Bruce Crabb

Approved Signatory:

Thank you for choosing Steve Moody Micro Services

Thank you for choosing Steve Moody Micro Services

Steve Moody Micro Services, LLC

Data Detail

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-05560

Project: Hedrick ES Room 206 Report Date: 05/09/2014 9:24 AM

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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:		Rm 2	206		Outs	ide		Outs	ide		
Debris Rating:		5			4		4				
Media Expires On:		Feb 2	015		Feb 2	.015		Feb 2	015		
Notes Included?:	See	Analyti	cal Notes	See	Analyti	ical Notes	See	Analyti	ical Notes		
Volume:		15	0		75	5		75	5		
	raw ct.	MDL	spores/m³	raw ct.	MDL	spores/m³	raw ct.	MDL	spores/m³		
Agaricus / Agrocybe	3	6.67	20 (<1%)								
Alternaria	13	6.67	87 (4%)				5	13.33	67 (<1%)		
Ascospores	5	6.67	33 (1%)	13	13.33	173 (3%)	44	13.33	587 (7%)		
Aspergillus / Penicillium	102	6.67	680 (28%)	86	13.33	1146 (18%)	95	13.33	1266 (15%)		
Basidiospores	51	6.67	340 (14%)	175	13.33	2333 (37%)	201	13.33	2679 (32%)		
Cercospora / Pseudocercospora							1	13.33	13 (<1%)		
Chaetomium	2	6.67	13 (<1%)								
Cladosporium	125	6.67	834 (34%)	132	13.33	1760 (28%)	226	13.33	3013 (36%)		
Coprinus group											
Curvularia	10	6.67	67 (3%)								
Drechslera / Bipolaris group	2	6.67	13 (<1%)								
Epicoccum				2	13.33	27 (<1%)	2	13.33	27 (<1%)		
Fusarium				4	13.33	53 (<1%)	1	13.33	13 (<1%)		
Hyphal / Spore Fragments	45	6.67	300 (12%)	54	13.33	720 (11%)	33	13.33	440 (5%)		
Memnoniella											
Myxomycete / Periconia / Rust / Smut	8	6.67	53 (2%)	8	13.33	107 (2%)	13	13.33	173 (2%)		
Pithomyces				2	13.33	27 (<1%)					
Stachybotrys	2	6.67	13 (<1%)								
TOTALS	368		2453 (100%)	476		6346 (100%)	621		8278 (100%)		
Analyst		Rob Gi	reene		Rob Gı	reene		Rob Gı	reene		
Analysis Date		5/9/2	014		5/9/2	014		5/9/2	014		

#### **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.

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

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-05560

Project: Hedrick ES Room 206 Report Date: 05/09/2014 9:24 AM

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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.

#### **Samples Analyzed**

Sample No: 1: Rm 206

Notes: 75% Occluded.

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**EXPANDED DEBRIS DESCRIPTION** 

Skin/Dander: 5/5 Inorganic/Other: 4/5 Insect Parts: 0/5

Fibers: 4/5 Pollen: 0/5

Sample No: 2 : Outside

Notes:

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EXPANDED DEBRIS DESCRIPTION

Skin/Dander: 0/5 Inorganic/Other: 5/5 Insect Parts: 0/5 Fibers: 1/5 Pollen: 0/5

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Sample No: 3 : Outside

Notes:

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**EXPANDED DEBRIS DESCRIPTION** 

Skin/Dander: 0/5 Inorganic/Other: 5/5 Insect Parts: 0/5 Fibers: 1/5 Pollen: 1/5

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#### Field Blanks

No discernable field blanks were submitted with this set of samples.

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-05560

Project: Hedrick ES Room 206 Report Date: 05/09/2014 9:24 AM

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

Page 2 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.

#### **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.



LAB#102577







DSHS License No.: LAB0117 AIHA EMPAT ID: 102577 9:24 AM 05/09/2014 **Sample Date:** 05/07/2014 14F-05560 Report Date Lab Job No. Supplemental Overview IAQ Mold Report Farmers Branch, TX 75234 Phone: (972) 241-8460 Apex TITAN, Inc. - Dallas, TX Hedrick ES Room 206 Steve Moody Micro Services, LLC 7210114H119 2051 Valley View Lane 7000 1000 8000 -0009 4000-2000--0009 Project #: Project: Client: Total Spores/m³



# Chain of Custody

Lab Job#	14F-05560	AUC:3
Lab Job#_		
$\it Lab  \it Job  \#$ _		

. icase can in	advance for immediate, after	r-hour, & weekend pricing &a	vailability.*	Page 🔔 of 🔔
<b>ASBESTOS</b>	PLM		<b>MOLD</b>	+ " +
	Immediate 1 day Analya		op Standard Air	☐ Immediate ☐ I day ☐ 2 day ☐ Immediate ☐ I day ☐ 2 day
PCM Air (74			Expanded Air Culture**	
	Immediate 1 day	☐ 2 day ☐ 3 day ☐ 5	day Analyze Blanks	☐ 10-14 days ☐ <b>Yes</b> ☐ <b>No</b>
TOTAL DUS	ST (0500/0600)	□ 2.4	**Turnaround of (	Culture Samples subject to Culture Growth**
ASBESTOS		z day	BACTERIA*	
Air AHERA Air 7402 (M Bulk/Wipea Water Analyze Bl	Modified)	☐ 12 hr ☐ 24 hr ☐ 2 day ☐ 3 day ☐ 2 day ☐ 3 day ☐ 5 ☐ 2 day ☐ 3 day ☐ 5 No	Total Colony C CC + Gram St Total Coliforn day  OTHER:	
Billing Com	pany/City: A	Tita		# of Samples:
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Submitter's N	Name: D. R.			<del></del>
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### **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.





**DATE:** August 4, 2014

**TO:** Patricia Cuckler, Principal

**SUBJECT:** Hedrick ES - IAQ - Initial Contact - Room 206

This morning, I received the following E-mail from you: "Can we get a air quality check for room # 206 as soon as possible. The new teacher reports the room smells of mold." At 8:40 AM, I inspected Room 206 and found no water intrusions. This morning, I also submitted P.O. request to Air Test Room 206. Apex Titan should be able to Air test Room 206 by Wednesday 8/6 and we should have the results by Friday 8/8. If you have any questions, please contact me. Thanks, Paul

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



**DATE:** August 15, 2014

**TO:** Patricia Cuckler, Principal

**SUBJECT:** Hedrick ES - IAQ - Air Test results - Room 206

#### Patricia...

On Thursday 8/7, Apex-Titan Air tested Room 206. 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 206, was 2.9% of the outdoor levels. Utilizing this theory, the indoor concentrations are within the acceptable guidelines for areas with filtered air or air conditioning. In that 2.9% were 4 spores of Stachybotrys. I am requesting Custodial to Shampoo the carpet today, and have the Air Conditioning on. We will retest next week. If you have any questions, please call me.

Thanks, Paul

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



August 12, 2014

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

Re: Limited Mold Assessment Services

Hedrick Elementary School

Room 206

1532 Bellaire Boulevard

Lewisville, Texas

Project No. 7210114H119A LISD PO# 91408107-00

#### **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 Hedrick Elementary School located at 1532 Bellaire Boulevard 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. Darren G. Bowden, a State of Texas licensed Mold Assessment Consultant (Lic. No. MAC0321) on August 7, 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 206. 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. P0114H301) dated August 5, 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 August 7, 2014 by Mr. Darren G. Bowden. Apex's visual reconnaissance of the Investigation areas revealed the following:

#### Temperature and Relative Humidity

Temperature readings collected inside the room was reported as 83.4 degrees Fahrenheit while relative humidity was reported as 41.2 percent. Temperature readings collected outside the building reported as 101 degrees Fahrenheit while outside relative humidity was reported as 40 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 <12% 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 1,320 counts/m³, while exterior levels ranged from 40,241 to 45,884 counts/m³.

Two (2) 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 206 reported Stachybotrys as 27 counts/m³ and Ganoderma as 13 counts/m³ while no exterior levels where reported.

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). Due to the levels of Stachybotrys compared to the building exterior, Apex considers the airborne mold concentration to be elevated.

#### **Suspect Mold**

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

#### **Conclusions and Recommendations**

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 (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



Steve Moody Micro Services, LLC

2051 Valley View Lane

DSHS License No.: LAB0117

AIHA EMPAT ID: 102577

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

Client: Apex TITAN, Inc. - Dallas, TX Lab Job No. 14F-09833 (version 3)

Project: Hedrick ES, Room 206 Report Date 08/21/2014 11:04 AM

**Project #:** 7210114H119A **Sample Date:** 08/07/2014

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 8/7/2014, three (3) samples were submitted by Darren Bowden 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		ntration bic meter
1	150	Room 206 * See Analytical Notes report for further details	Basidiospores Aspergillus / Penicillium Hyphal / Spore Fragments Myxomycete / Periconia / Rust / Smut Cladosporium Ascospores Alternaria Stachybotrys Agaricus / Agrocybe Epicoccum Chaetomium	480 307 140 100 87 73 33 27 20 20	36% 23% 11% 8% 7% 6% 2% 2% 2% 2%
			Ganoderma  Total:	13 1320	<1%

Steve Moody Micro Services, LLC

2051 Valley View Lane

DSHS License No.: LAB0117

AIHA EMPAT ID: 102577

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

Client: Apex TITAN, Inc. - Dallas, TX Lab Job No. 14F-09833 (version 3)

Project: Hedrick ES, Room 206 Report Date 08/21/2014 11:04 AM

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On 8/7/2014, three (3) samples were submitted by Darren Bowden 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		ntration
2	75	Outside * See Analytical Notes report for further details	Basidiospores Cladosporium Aspergillus / Penicillium Myxomycete / Periconia / Rust / Smut Hyphal / Spore Fragments Ascospores Fusarium Curvularia Alternaria Agaricus / Agrocybe Nigrospora Epicoccum Cercospora / Pseudocercospora Chaetomium Drechslera / Bipolaris group  Total:	15929 15223 8331 2000 1506 973 560 427 307 187 147 107 80 67 40	35% 33% 18% 4% 3% 2% 1% <1% <1% <1% <1% <1% <1% <1% <1% <1%

Steve Moody Micro Services, LLC DSHS License No.: LAB0117 Summary 2051 Valley View Lane AIHA EMPAT ID: 102577

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

Apex TITAN, Inc. - Dallas, TX Lab Job No. 14F-09833 **Client:** (version 3)

**Project:** Hedrick ES, Room 206 **Report Date** 08/21/2014 11:04 AM

Project #: 7210114H119A **Sample Date:** 08/07/2014

Sample Type: Spore Trap, Non-cultured Spore Trap Type: Zefon - Air-O-Cell

Test Method: Mold: ASTM D7391-09 - Standard Profile Page 3 of 3

On 8/7/2014, three (3) samples were submitted by Darren Bowden 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		ntration
3	75	Outside * See Analytical Notes report for further details	Basidiospores Cladosporium Aspergillus / Penicillium Myxomycete / Periconia / Rust / Smut Hyphal / Spore Fragments Fusarium Alternaria Agaricus / Agrocybe Nigrospora Ascospores Coprinus group Drechslera / Bipolaris group Cercospora / Pseudocercospora	13610 13263 8331 1306 1000 746 573 333 280 280 173 173 120	34% 33% 21% 3% 2% 2% 1% <1% <1% <1% <1% <1% <1%
			Curvularia Total:	53 40241	<1%

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): Rob Greene

Lab Manager: Heather Lopez

Lab Director: Bruce Crabb

Approved Signatory: Bene Cull

Thank you for choosing Steve Moody Micro Services

**Data Detail** Steve Moody Micro Services, LLC

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-09833 (version 3)

**Project:** Hedrick ES, Room 206 **Report Date:** 08/21/2014 11:04 AM

7210114H119A Project #: **Sample Date:** 08/07/2014

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:	Room 206			Outside			Outside					
Media Expires On:	Feb 2015			Feb 2015			Feb 2015					
Notes Included?:	See Analytical Notes		See Analytical Notes			See Analytical Notes						
Volume:	150			75			75					
	raw ct.	MDL	spores/m³		raw ct.	MDL	spores/m³		raw ct.	MDL	spores/m³	
Agaricus / Agrocybe	3	6.67	20	2%	14	13.33	187	<1%	25	13.33	333	<1%
Alternaria	5	6.67	33	2%	23	13.33	307	<1%	43	13.33	573	1%
Ascospores	11	6.67	73	6%	73	13.33	973	2%	21	13.33	280	<1%
Aspergillus / Penicillium	46	6.67	307	23%	625	13.33	8331	18%	625	13.33	8331	21%
Basidiospores	72	6.67	480	36%	1195	13.33	15929	35%	1021	13.33	13610	34%
Cercospora / Pseudocercospora					6	13.33	80	<1%	9	13.33	120	<1%
Chaetomium	3	6.67	20	2%	5	13.33	67	<1%				
Cladosporium	13	6.67	87	7%	1142	13.33	15223	33%	995	13.33	13263	33%
Coprinus group									13	13.33	173	<1%
Curvularia					32	13.33	427	<1%	4	13.33	53	<1%
Drechslera / Bipolaris group					3	13.33	40	<1%	13	13.33	173	<1%
Epicoccum	3	6.67	20	2%	8	13.33	107	<1%				
Fusarium					42	13.33	560	1%	56	13.33	746	2%
Ganoderma	2	6.67	13	<1%								
Hyphal / Spore Fragments	21	6.67	140	11%	113	13.33	1506	3%	75	13.33	1000	2%
Memnoniella												
Myxomycete / Periconia / Rust / Smut	15	6.67	100	8%	150	13.33	2000	4%	98	13.33	1306	3%
Nigrospora					11	13.33	147	<1%	21	13.33	280	<1%
Stachybotrys	4	6.67	27	2%								
TOTALS	198		1320	100%	3442		45884	100%	3019		40241	100%
Analyst	Rob Greene		Rob Greene			Rob Greene						
Analysis Date	8/11/2014		8/11/2014			8/11/2014						
Debris Rating	5			5			5					
Debris Composition												

Steve Moody Micro Services, LLC

**Analytical Notes** 

DSHS License No.: LAB0117 AIHA EMPAT ID: 102577

2051 Valley View Lane

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

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

**Lab Job No.:** 14F-09833

(version 3)

Hedrick ES, Room 206 **Project:** 

**Report Date:** 08/21/2014

11:04 AM

Project #: 7210114H119A

**Sample Date:** 08/07/2014

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

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.

#### Samples Analyzed

Sample No: 1: Room 206

Notes:

60% Occluded.

#### EXPANDED DEBRIS DESCRIPTION

Skin/Dander: 4/5 Inorganic/Other: 5/5 Insect Parts: 1/5

Fibers: 4/5 Pollen: 1/5

Sample No: 2 : Outside

Notes:

55% Occluded.

\_\_\_\_\_

#### EXPANDED DEBRIS DESCRIPTION

Skin/Dander: 0/5 Inorganic/Other: 5/5 Insect Parts: 0/5 Fibers: 2/5

Pollen: 2/5

Sample No: 3: Outside

Notes: 55% Occluded.

#### EXPANDED DEBRIS DESCRIPTION

Skin/Dander: 1/5 Inorganic/Other: 5/5 Insect Parts: 0/5 Fibers: 2/5 Pollen: 2/5

#### Field Blanks

No discernable field blanks were submitted with this set of samples.

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-09833 (version 3)

Project: Hedrick ES, Room 206

Report Date: 08/21/2014 11:04 AM

**Project #:** 7210114H119A **Sample Date:** 08/07/2014

Sample Type: Spore Trap, Non-cultured Spore Trap Type: Zefon - Air-O-Cell

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

Page 2 of 3

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.

#### **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.

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, TXLab Job No.: 14F-09833 (version 3)Project:Hedrick ES, Room 206Report Date: 08/21/2014 11:04 AM

**Project #:** 7210114H119A **Sample Date:** 08/07/2014

Sample Type: Spore Trap, Non-cultured Spore Trap Type: Zefon - Air-O-Cell

**Test Method:** Mold: ASTM D7391-09 - Standard Profile Page 3 of 3

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.



LAB # 102577







(version 3) 11:04 AM DSHS License No.: LAB0117 AIHA EMPAT ID: 102577 08/21/2014 14F-09833 **Sample Date:** 08/07/2014 Report Date Lab Job No. Supplemental Overview IAQ Mold Report Farmers Branch, TX 75234 Phone: (972) 241-8460 Apex TITAN, Inc. - Dallas, TX Hedrick ES, Room 206 Steve Moody Micro Services, LLC 7210114H119A 2051 Valley View Lane 20000 45000 -40000 15000 -10000 35000-30000 25000-20000 -0009 Project #: Project: Client: Total Spores/m³



# Chain of Custody

-	14F-09833	Acc.3	
Lab Job#_ Lab Job#_			_

			Lub 300 #		
*Please call in a	ndvance for immediate, after-hour, & w	eekend pricing &availabilit	y.*		Page / of /
ASBESTOS			MOLD		rage or
<u>PCM Air (74</u>	<del></del>	Positive Stop	Direct Exam Standard Air Expanded Air Culture**	Immediate 1 Immedi	day 🔲 2 day
		☐ 3 day ☐ 5 day	Analyze Blanks	☐ 10-14 days ☐ No.	0
TOTAL DUS	T (0500/0600)		•	Culture Samples subject to	
ASBESTOS Air AHERA Air 7402 (M Bulk/Wipe/ Water Analyze Bl	A Method	☐ 24 hr ☐ 3 day ☐ 3 day ☐ 5 day ☐ 3 day	BACTERIA*  Total Colony C CC + Gram Sta Total Coliform  OTHER:		day 🔲 5 day
Billing Comp	pany/City: Heritage E	5- Loon 20	to April 7	TAn) # of Samples:	2
Submitter's C	Company: Apex TITAN				
Submitter's N					210114 H 119A
Project:	Heritages- Down			Phone #:	<u> </u>
				Mobile #:	
E-mail Result	ts to:			Fax #:	
Invoice Addre	· · · · · · · · · · · · · · · · · · ·			P.O. #:	
*Please review pap	erwork and samples before submitting to lab.	Unsealed / improperly packaged /	damaged / expired sampl	<del></del>	equests may incur additional fees*
Notes:				-	
Sample #	Sample Descrip		ol. / Area fapplicable)	Location / 1	Notes
)	Loon 206		150	83.40 / 4	112%
L L	outsile		25		1.1%
2	outsile		3/	701 / / 0	7.7.70
ر	- OISIQ		75	· · · · · · · · · · · · · · · · · · ·	
			A	1M Z127	3
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Released By:	1.5/	Date / Time: Re	eceived By:	rea Ch	Date / Time: 8-7-14 12:44M
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### **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 - Retest

Hedrick Elementary School

Room 206

1532 Bellaire Boulevard

Lewisville, Texas

Project No. 7210114H119B LISD PO# 91409943-00

#### **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 Hedrick Elementary School located at 1532 Bellaire Boulevard 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 206. 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. P0114H1321) dated August 21, 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 72.3 degrees Fahrenheit while relative humidity was reported as 38.4 percent. Temperature readings collected outside the building ranged from 90.8 to 91.0 degrees Fahrenheit while outside relative humidity ranged from 46.5 to 51.3 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 room was 10-12% 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 5,488 counts/m³, while exterior levels ranged from 21,327 to 45,307 counts/m³.

One (1) type 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 206 reported Coprinus group as 193 counts/m³ while no exterior levels where reported.

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). Due to the levels of Stachybotrys compared to the building exterior, Apex considers the airborne mold concentration to be elevated.

#### **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



Steve Moody Micro Services, LLC

2051 Valley View Lane

DSHS License No.: LAB0117

AIHA EMPAT ID: 102577

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

Client: Apex TITAN, Inc. - Dallas, TX Lab Job No. 14F-11876

Project: Hedrick ES Room 206 - Retest Report Date 09/23/2014 12:40 PM

**Project #:** 7210114H1198 **Sample Date:** 09/19/2014

Sample Type: Spore Trap, Non-cultured Spore Trap Type: Zefon - Air-O-Cell

**Test Method:** Mold: ASTM D7391-09 - Standard Profile Page 1 of 2

On 9/19/2014, 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		ntration abic meter
1	75	Exterior, Northwest	Basidiospores Cladosporium Aspergillus / Penicillium Ascospores Myxomycete / Periconia / Rust / Smut Hyphal / Spore Fragments Drechslera / Bipolaris group Nigrospora Alternaria Fusarium Curvularia Ganoderma Pithomyces	10597 4692 2786 1013 826 573 320 173 147 67 67 53	50% 22% 13% 5% 4% 3% 2% <1% <1% <1% <1% <1% <1%
			Total:	21327	100%
2 75 Exterior, Northeast		Exterior, Northeast	Alternaria Basidiospores Cladosporium Aspergillus / Penicillium Ascospores Drechslera / Bipolaris group Hyphal / Spore Fragments Myxomycete / Periconia / Rust / Smut Nigrospora Fusarium Curvularia Cercospora / Pseudocercospora Torula  Total:	17502 12943 6478 4692 786 746 720 427 400 293 253 40 27	39% 29% 14% 10% 2% 2% <1% <1% <1% <1% <1% <1% <1% <1% <1% <1

Steve Moody Micro Services, LLC DSHS License No.: LAB0117 Summary 2051 Valley View Lane AIHA EMPAT ID: 102577

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

Lab Job No. 14F-11876 **Client:** Apex TITAN, Inc. - Dallas, TX

**Project:** Hedrick ES Room 206 - Retest **Report Date** 09/23/2014 12:40 PM

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	(liters)	Sample Description	Identification		ntration bic meter
3	150	Room 206	Basidiospores	2154	39%
		* See Analytical Notes report for	Aspergillus / Penicillium	1434	26%
		further details	Cladosporium	880	16%
			Drechslera / Bipolaris group	280	5%
			Coprinus group	193	4%
			Myxomycete / Periconia / Rust / Smut	160	3%
			Alternaria	160	3%
			Curvularia	140	3%
			Hyphal / Spore Fragments	87	2%
			Total:	5488	100%

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): Rob Greene

Lab Manager: Heather Lopez

Lab Director: Bruce Crabb

Thank you for choosing Steve Moody Micro Services

Approved Signatory: Bene Gull

Steve Moody Micro Services, LLC

Data Detail

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-11876

Project: Hedrick ES Room 206 - Retest Report Date: 09/23/2014 12:40 PM

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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			2	3							
Location:		Exterior, Northwest Exterior, Northeast				Room 206						
Media Expires On:												
Notes Included:												
Volume:	75			75			150					
	raw ct.	MDL	spores/m³		raw ct.	MDL	spores/m³		raw ct.	MDL	spores/m³	
Alternaria	11	13.33	147	<1%	1313	13.33	17502	39%	24	6.67	160	3%
Ascospores	76	13.33	1013	5%	59	13.33	786	2%				
Aspergillus / Penicillium	209	13.33	2786	13%	352	13.33	4692	10%	215	6.67	1434	26%
Basidiospores	795	13.33	10597	50%	971	13.33	12943	29%	323	6.67	2154	39%
Cercospora / Pseudocercospora					3	13.33	40	<1%				
Chaetomium												
Cladosporium	352	13.33	4692	22%	486	13.33	6478	14%	132	6.67	880	16%
Coprinus group									29	6.67	193	4%
Curvularia	5	13.33	67	<1%	19	13.33	253	<1%	21	6.67	140	3%
Drechslera / Bipolaris group	24	13.33	320	2%	56	13.33	746	2%	42	6.67	280	5%
Fusarium	5	13.33	67	<1%	22	13.33	293	<1%				
Ganoderma	4	13.33	53	<1%								
Hyphal / Spore Fragments	43	13.33	573	3%	54	13.33	720	2%	13	6.67	87	2%
Memnoniella												
Myxomycete / Periconia / Rust / Smut	62	13.33	826	4%	32	13.33	427	<1%	24	6.67	160	3%
Nigrospora	13	13.33	173	<1%	30	13.33	400	<1%				
Pithomyces	1	13.33	13	<1%								
Stachybotrys												
Torula					2	13.33	27	<1%				
TOTALS	1600		21327	100%	3399		45307	100%	823		5488	100%
Analyst		Rob	Rob Greene			Rob Greene			Rob Greene			
Analysis Date		9/23/2014			9/23/2014			9/23/2014				
Debris Rating			4			4		5				
Debris Composition												
Fibers		1/5			1/5			5/5				
Inorganic/Other	4/5			4/5			5/5					
Insect Parts			0/5				1/5				0/5	
Pollen			2/5		4/5			1/5				
Skin/Dander			0/5				0/5				5/5	

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-11876

Project: Hedrick ES Room 206 - Retest Report Date: 09/23/2014 12:40 PM

**Project #:** 7210114H1198 **Sample Date:** 09/19/2014

Sample Type: Spore Trap, Non-cultured Spore Trap Type: Zefon - Air-O-Cell

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

Page 1 of 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.

#### Samples Analyzed

Sample No: 3 : Room 206 Notes: 95% Occluded.

#### Field Blanks

No discernable field blanks were submitted with this set of samples.

#### NOTE: All remaining samples suitable for analysis.

#### **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.

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-11876

Project: Hedrick ES Room 206 - Retest Report Date: 09/23/2014 12:40 PM

**Project #:** 7210114H1198 **Sample Date:** 09/19/2014

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**Test Method:** Mold: ASTM D7391-09 - Standard Profile Page 2 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.



LAB # 102577







DSHS License No.: LAB0117 AIHA EMPAT ID: 102577 **Sample Date:** 09/19/2014 14F-11876 Lab Job No. Report Date Supplemental Overview IAQ Mold Report Farmers Branch, TX 75234 Phone: (972) 241-8460 Apex TITAN, Inc. - Dallas, TX Hedrick ES Room 206 - Retest Steve Moody Micro Services, LLC 7210114H1198 2051 Valley View Lane 50000一 35000 20000 15000 40000 30000 25000-10000 5000 45000 -Project #: Project: Client: Total Spores/m<sup>3</sup>

# Chain of Custody

Page	1	of	_1



Lab Job#_	14F-11876	Acc:3
Lab Job#_		
Lab Job#_		

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

urnaround of Cul	ture Samples subject to Culture Growth**		
ASBESTOS P Bulk	LM 3 day 2 day 3 day 5 day 1m Im Analyze All Positive Stop	ı	ASBESTOS TEM  Air AHERA Method
PCM Air (740 TOTAL DUS	0) $\square$ 1 day $\square$ 2 day $\square$ 3 day $\square$ 5 day $\square$ 5 day $\square$ 1 day $\square$ 2 day	_] Immediate	Water □1 day □2 day □3 day Analyze Blanks □Yes □No
Analyze	(Tape / Bulk / Air  ☐ 1 day  ☐ 2 day ☐ In  ☐ 1 day ☐ 2 day ☐ In  ☐ Air Expanded ☐ Blanks ☐ Yes ☐ No ab / Bulk / Plate) ☐ 7-14 day	mmediate Profile	BACTERIA Heterotrophic Plate Count (HPC) ☐ 3 day HPC + Gram Stain ☐ 3 day ☐ 5 day HPC + 3 Gram Neg ID ☐ 6-8 day HPC + 5 Gram Neg ID ☐ 6-8 day Fecal Coliform (MPN) ☐ 3 day Total Coliform & E Coli (P/A) ☐ 2-3 day
Billing Comp	pany / City: Apex Titen Chelics South	١	# of Samples:
	Company:		
	Jame: Clint Jech		
	drick ES Room 200-Ratest		
Contact Info	rmation: Name: Chut Jech		Mobile #: (172) 481-1031
E-mail Result	ts to: Cliet/Durren / Veronica		Fax #:
	ess: Veronice		P.O. #:
			pired samples or excessive administrative requests may incur additional fees—
Notes:			
Notes	Γ	Vol. / Area	a Variation / Naton
Sample #	Sample Description	if applicable	
1	Enterior, Northwest	75	7= 91.0 - M= 51.3 °/-
2	Exterior, Northeust	75	T=90.8 -11=46.5.1.
3_	800m 206	150	T= 72.3" H=38.4"1. M+10-12-1.
			Cribing Cribing Tila Wells = Dryman 1 / Cock Board on Dryn
			Weis = Dryum 11/Cock Board on Dry
			Floors: Corpet
Released By:	Date / Time:	Received By	
	9//9/2014 /SCO Date / Time:	Received By	y: Date / Time:
Released By:	Date / Time.	Received By	

## **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.

