



Mold Investigation Report

Location:

235 Litchfield
Houston, TX 77024

Prepared By:

Platinum Environmental Solutions LLC
8403 Braesview Lane
Houston, TX 77071

A handwritten signature in blue ink, appearing to read 'C. Felan', is positioned above the printed name of the consultant.

Christopher Felan M. S.
Mold Assessment Consultant
License # M.A.C. 1278

December 3, 2018

Limited Mold Assessment Report

Client Name: Miriam Berre

Inspection Date: November 30, 2018

Inspection Address: 235 Litchfield, Houston TX 77024

Inspector Name: Christopher Felan M.S.

Introduction

Platinum Environmental Solutions, LLC (PES) has completed a limited mold assessment (LMA) at the above-listed location (Site) on the above-listed date (Inspection Date) for Miriam Berre (Client). The inspection was performed by Mr. Christopher Felan; a State of Texas licensed Mold Assessment Consultant (License #M.A.C. 1278). The LMA was conducted to identify the presence or potential presence of moisture intrusion (indicated by staining or visible moisture) at the site, based on industry-standard criteria and methodologies. The LMA included a visual reconnaissance of readily accessible areas at the Site, and suspect mold growth sampling and analysis for non-viable mold spores at suspect locations using (Air cassettes, swabs, tape, or any combination thereof). The inspection area was limited to the living room and kitchen.

Field Investigation Approach

PES uses the industry standard approach of comparative analysis when evaluating suspected mold impacts. Assessment criteria have been set by the American Conference of Governmental Industrial Hygienists (ACGIH) for fungal spores, and are related to the "indoor/outdoor" comparative relationship where the indoor (test) air quality key indicators should equal to or less than that of outdoor (control) air quality key indicators (*ACGIH BioAerosols, Assessment and Controls publication, 1999*). The key indicators of potential mold intrusion and general indoor air quality are Relative Humidity (RH), Temperature, and observed staining/moisture. PES obtained these measurements for the Site with portable measurement devices, using an Extech Humidity / Temperature Pen 445580.

Although not regulated, RH and temperature are directly related to comfort in the occupied space, but are subjective to individual sensitivities and preferences. In addition, all three indicators can also impact the effectiveness of electronics and other S-4 equipment. Guidelines have been published by the American Society of Heating, Refrigerating & Air Conditioning Engineers (ASHRAE) describing the thermal and RH environmental conditions that at least 80% of the persons who occupy that environment will find acceptable or "comfortable", as indicated below:

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

Field Investigation Observations and Readings

Outdoor Weather Conditions

Outdoor Temperature: 71°

Outdoor Humidity: 95%

Inside Temperature: 72%

Inside Humidity: 60%

Indoor Observations

Musty smell or odor present: No

Visible water damage: No

Ceiling damage observed: No

HVAC Issues reported: No

Occupant Illness reported: No

Visible Staining Present: No

Possible mold growth observed: No

Windows leaking: No

Plumbing issues: No

Occupant illness widespread: No

Areas of Concern

Living Room Observations: No smell of mold. No visible mold.

Kitchen Observations: No smell of mold. No visible mold.

As a result of these observations and as recommended by PES with the approval of CLIENT, An air sample was collected from the living room and kitchen.

Air Monitoring Results

PES collected one (1) air sample from outside to set a baseline and one (1) air sample each from the living room and kitchen. The three (3) microbial samples were analyzed by Environmental Analytical Services LLC. Houston, Texas; Environmental Analytical Services LLC 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 Allergenco D cassettes found that airborne mold spores in the living room and kitchen areas were considerably lower and were qualitatively similar to those measured outside of the house at the time the sampling was performed.

The sampling event that we took in the living room and kitchen showed very little to no spores of concern.

Total fungal spore concentration within the living room reported 213 spores/m³. The total fungal spore concentration outdoor level was reported at 5360 spores/m³.

Total fungal spore concentration within the kitchen reported 120 spores/m³. The total fungal spore concentration outdoor level was reported at 5360 spores/m³.

Conclusions and Recommendations

It is the professional opinion of PES through this limited assessment and the analytical results, that it appears that the indoor air quality, as it relates to airborne fungi, was within recommended guidelines on this day. Further testing may be considered for a higher level of confidence. If you have any questions regarding this report or if we can assist you with any other matter, please contact the undersigned at (713) 446-9737.

Limitations/Standard of Care and Reliance

Any air sampling results are limited in that they represent airborne concentrations at the time of sample collection only. Changes in operating procedures, ventilation, temperature, occupancy, procedures, equipment, sources, products used, and other conditions may cause variations in anticipated airborne concentrations. This site assessment report is submitted based on published information and general site reconnaissance procedures. Additional environmental concerns regarding asbestos containing materials, radon and lead-based paint may be present but not specifically addressed by PES without testing for those specific parameters. This report has been prepared for and is intended for the exclusive use of CLIENT.

Any other party without the express written consent of Platinum Environmental Solutions, LLC, should not rely upon the contents of this report. Furthermore, PES does not warrant, guarantee, or certify the accuracy or completeness of work performed by others, or the absence of environmental risks, either expressed or implied.

The scope executed for this project did not include any inquiry with respect to the presence of asbestos, lead-based paint, and the presence of radon or other naturally occurring materials.

PES has strived to conform to generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area in performing this assessment. PES has attempted to observe a degree of care and skill generally exercised by the technical community under

similar circumstances and conditions. Our findings and conclusions must be considered probabilities based upon professional judgment concerning the significance of the limited data gathered during the course of the PES has performed the tasks set forth above in a thorough and professional manner consistent with industry standards and under supervision of a certified professional.

PES cannot guarantee and does not warrant that this microbial assessment has revealed all adverse environmental conditions affecting the site. Nor can PES warrant that the assessment requested would satisfy the dictates of, or provide a legal defense in connection with, environmental laws or regulation.

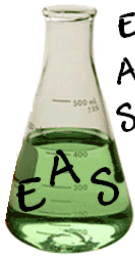
The results reported and any opinions reached by PES are for the benefit of the client. The results and opinions set forth by PES in its report will be valid as of the date of the report.

Platinum Environmental Solutions, LLC

A handwritten signature in blue ink, appearing to read 'C. Felan', is positioned above the printed name and title. The signature is fluid and cursive.

Christopher Felan M.S.
Principal Scientist
Texas Mold Assessment Consultant
License No. M.A.C. 1278

Attachments: Analytical Results/Chain of Custody/M.A.C. License



Environmental Analytical Services, LLC

Client: Platinum Environmental Solutions
Address: 8403 Braesview Rd
Houston, Texas 77071
Phone: 713-446-9737
Email: Chris@moldinspectionhouston.com
Project #: P#1811-31
EAS Job #: PES18.280
Project Name: 235 Litchfield

Received Date: November 30, 2018
 Report Date: December 3, 2018
 Turnaround Time: **24-Hours**

Biologic Particle Report
Analysis: Light Microscopy Identification of Pollen/Fungal spore
 Sample media : Allergenco-D (airborne)

Attention: **Christopher Felan**

Sample # Location Volume	S-1 Baseline			S-2 Living Room			S-3 Kitchen			Not Used		
	75			75			75					
Conclusion	Control			Not Elevated			Not Elevated					
Alternaria	85	1,133	21.1									
Ascomycetes	66	880	16.4									
Basidiomycetes	41	547	10.2									
Botrytis												
Chaetomium												
Cladosporium	62	827	15.4	16	213	100.0	9	120	100.0			
Curvularia	53	707	13.2									
Drechslera/Helm.	14	187	3.5									
Epicoccum												
Oidium/Erysiphe												
Fusarium												
Myxomycetes												
Mucor												
Penicillium/Asp.	30	400	7.5									
Nigrospora	45	600	11.2									
Peronosporae												
Pithomyces												
Smut												
Stachybotrys												
Stemphillium												
Unidentified	6	80	1.5									
Pollen	105	1,400										
% Particulates Loading/Background Debris	40.00%			2.00%			2.00%					
Total Spores	402	5,360		16	213		9	120				
	Total	Cnts./	Per-	Total	Cnts./	Per-	Total	Cnts./	Per-	Total	Cnts./	Per-

Analyst-Arthur Hernandez

Lab Director- Arthur Hernandez

LABORATORY ANALYSIS METHOD

Summary of light microscopy analysis of allergenic particles in tape or air cassettes. Tape lift samples indicate presence or absence and identification of known allergenic particles. Sample analysis is performed only by professionally trained individuals. This test report relates only to the items tested. This report does not imply endorsement by any US Government agency. This report may not be reproduced except in full, without written permission by EAS. These results are submitted pursuant to EAS current terms and condition of sale, including the company's standard warranty and limitation of liability provisions and no responsibility or liability is assumed for the manner in which the results are used or interpreted. If there are concerns about health aspects of known allergens, consult a physician. Pollen and spore types identified are all naturally occurring and may grow anywhere in a natural environment where water is present. While it is normal for fungi to be present inside all buildings from outside sources, growth occurs in humid conditions. Fungi cannot spread from building to building, as it is always present, but may or may not be growing. To control allergens in an inside area, drying and use of filters are recommended. Bias is present in all types of spore trap cassettes by particle size, capture, spread, and counting procedure used. Quantification is susceptible to variance of 100% and standard deviation of 200%. Unless notified in writing to return the samples covered by this report, EAS will store the samples for a period of ninety (90) days before discarding. A shipping and handling fee may be assessed for the return of any samples.

Notes: DSHS # LAB-1000
 Analysis performed at Environmental Analytical Services, L.L.C. 13201 Northwest Freeway, Suite 520, Houston, TX 77040
 phone (713) 343-4017, fax (713) 934-9942

Background debris qualitatively estimates the amount of particles that are not pollen or spores and directly affects the accuracy of the spore counts. The categories of Light, Moderate, Heavy, and Too Heavy, for Accurate Count, are used to indicate the amount of deposited debris. Increasing amounts of debris will obscure small spores and can prevent spores from impacting onto the slide. The actual number of spores present in the sample is likely higher than reported if the debris estimate is "Heavy" or "Too Heavy for Accurate Count". All calculations are rounded to two significant figures and therefore, percentage of spore numbers may not equal 100%.

***Minimum Detection Limit.** Based on the volume of air sampled, this is the lowest number of spores that can be detected and is an estimate of the lowest concentration of spores that can be read in the sample.

Spores that were observed from the samples submitted are listed on this report. If a spore is not listed on this report it was not observed in the samples submitted.

Interpretation Guidelines: A determination is added to the report to help users interpret the mold analysis results. A mold report is only one aspect of an indoor air quality investigation. The most important aspect of mold growth in a living space is the availability of water. Without a source of water, mold generally will not become a problem in buildings. These determinations are in no way meant to imply any health outcomes or financial decisions based solely on this report. For Questions related to medical conditions you should consult an occupational or environmental health physician or professional.

Control: is a baseline sample showing what the spore count and diversity is at the time of sampling. The control sample(s) is usually collected outside of the structure being tested and used to determine if this sample(s) is similar in diversity and abundance to the inside sample(s).

Elevated: means that the amount and/or the diversity of spores, as compared to the control sample and other samples in our database, are higher than expected. This can indicate that fungi have grown because of a water leak or water intrusion. Fungi that are considered to be indicators of water damage include, but are not limited to *Chaetomium*, *Fusarium*, *Memnoniella*, *Stachybotrys*, *Scopulariopsis*, *Ulocladium*.

Not Elevated: means that the amount and/or the diversity of spores, as compared to the control sample and other samples in our database, are lower than expected and may indicate no problematic fungal growth.

Unusual: means that the presence of current or former growth was observed in the analyzed sample. An abundance of spores are present, and/or growth structures including hyphae and/or fruiting bodies are present and associated with one or more of the types of mold/fungi identified in the analyzed sample.

Normal: means that no presence of current or former growth was observed in the analyzed sample. If spores are recorded they are normally what is in the air and have settled on the surface(s).



Christopher Skidmore unit 235

Claim #:

SERVPRO® Job #:

Job Summary

Customer and Job Information

Customer Name:	Christopher Skidmore unit 235	Insurance / Client:	_____
Claim / PO Number:	_____	Policy / WO Number:	_____
Servpro Job Number:	_____	Customer Phone:	_____
Job Address 1:	304 litchfield ln	Customer Email:	_____
Job Address 2:	235		
City, State, Zip:	Houston, TX 77024		

Timestamps

Loss Received:	9/17/2017 8:35 AM (CDT)	Customer Called:	9/17/2017 8:35 AM (CDT)
Date of Loss:	9/17/2017 8:34 AM (CDT)	Arrival on Site:	9/17/2017 8:38 AM (CDT)
Drying Complete:	9/20/2017 8:55 AM (CDT)		

Loss Information

Type of Loss:	Water	Cause of Loss:	_____
Structure Type:	Residential	Property Type:	Unknown
Electricity Available:	Unknown	Year Structure Built:	_____

Franchise Information

Name: North Richland Hills

Address: 2369 Pecan Ct.

Fort Worth, TX 76117

Phone: (817) 589-1499

Additional Loss Information

Category of Water:	3	Class of Water:	2
Days to Achieve Dry Standard:	3.01	Total Affected SF:	897.17
Drying Zones:	1		



Equipment

Placement Count by Day and Type

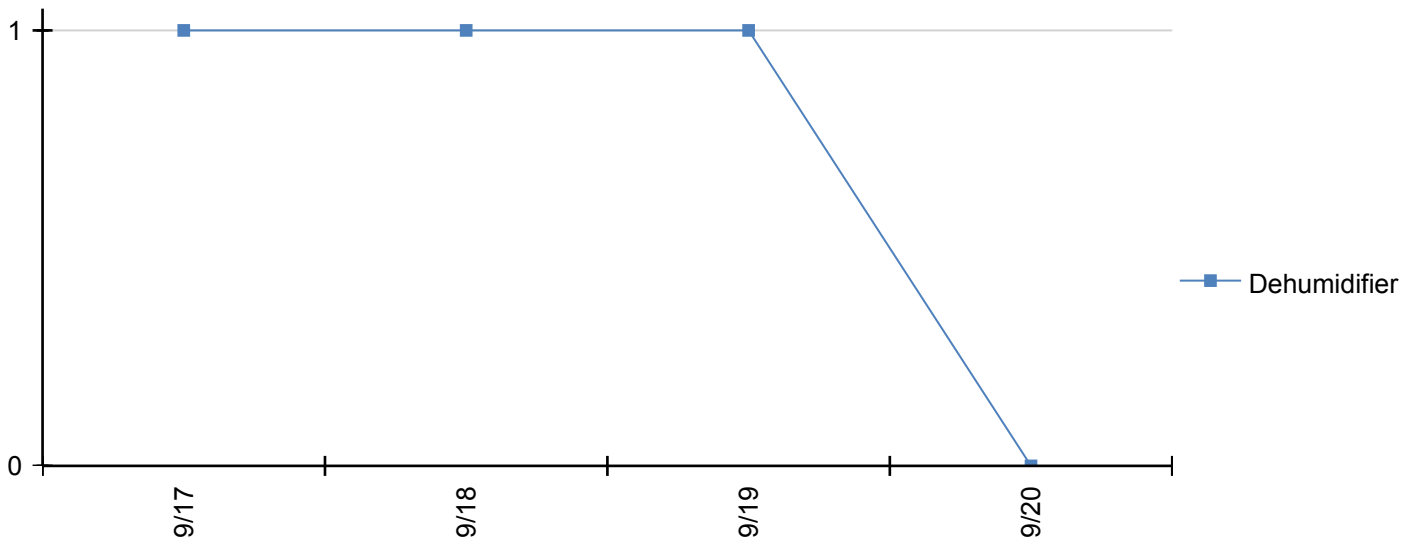
Day	9/17	9/18	9/19	9/20	Total
Dehumidifier	1	1	1	0	3
Total	1	1	1	0	3

Usage Summary

Equipment Type	Room	Equipment Model	Asset Number	Placed	Removed	Total Days*	Total Hours*
Dehumidifier	Livingroom	7000XLI	NRH192	9/17/2017 8:38 AM	9/20/2017 8:55 AM	3.01	72.2
	Total					3.01	72.2
Total						3.01	72.2

* Equipment Calculations are based on the difference between the "Removed Timestamp" and the "Placed Timestamp" for each piece of equipment. In the event that a piece of equipment has not yet been removed from the job, then the "Report Run Timestamp" will be used for calculations. Hours are calculated by multiplying the days by 24.

Usage Chart





Christopher Skidmore unit 235

Claim #:

SERVPRO® Job #:

Diary Notes

Timestamp	Subject/Note
9/17/2017 8:35 AM (CDT)	Customer Initial Contact
9/17/2017 8:36 PM (CDT)	Loss Notes
9/17/2017 8:36 PM (CDT)	Initial Call
9/17/2017 8:40 PM (CDT)	Zone 1 - Zone Water Class Override storm event
9/17/2017 8:51 PM (CDT)	Equipment Validation Exception (Zone 1) We are only placing 1 of our extra lrg dehus and we are placing 16 of the contractors airmovers as requested in our scope of work since we are only drying studs
9/17/2017 8:55 PM (CDT)	HVAC turned off HVAC turned off for Visit 1
9/18/2017 4:03 PM (CDT)	HVAC turned off HVAC turned off for Visit 2
9/19/2017 9:29 AM (CDT)	HVAC turned off HVAC turned off for Visit 3
9/22/2017 8:56 AM (CDT)	HVAC turned off HVAC turned off for Visit 4



Christopher Skidmore unit 235

Claim #:

SERVPRO® Job #:

Zone Composition and Validation

Zone 1

Water Category:	3	Water Class:	2*
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Dehu Min Capacity Required:	138 PPD	Air Movers Requirement Method:	Square Feet
Dehu Actual Capacity Placed:	130 PPD	Air Movers Required:	19 - 21
Dehumidifiers Placed:	1	Air Movers Placed:	0
See Job Diary Notes		One or more rooms is not in range. See diary note for explanation and see detail in the section below.	

*Zone's recommended water class has been overridden – see diary note for explanation.

Zone 1 Cubic Footage, Floor Linear Footage and Total Affected Square Footage

Room Name	Cubic Footage		Floor Linear Footage			Total Affected Square Footage		
	Total Room	Offsets Insets	Affected	Offsets Insets	Missing Spaces	Affected	Offsets Insets	Missing Spaces
Bathroom	147.69	0.00	0.00	0.00	0.00	55.50	0.00	0.00
Closet 1	186.45	0.00	0.00	0.00	0.00	68.50	0.00	0.00
Closet 2	59.63	0.00	0.00	0.00	0.00	38.00	0.00	0.00
Dinning room	1,481.85	0.00	0.00	0.00	0.00	161.00	0.00	0.00
Entry hallway	848.49	0.00	0.00	0.00	0.00	129.00	0.00	0.00
Kitchen	858.31	0.00	0.00	0.00	0.00	158.67	0.00	0.00
Laundry room	242.49	0.00	0.00	0.00	0.00	63.00	0.00	0.00
Livingroom	3,030.32	0.00	0.00	0.00	0.00	223.50	0.00	0.00
Total	6,855.23	0.00	0.00	0.00	0.00	897.17	0.00	0.00

Zone 1 Affected Surfaces % and Equipment Placements for Validation

Room Name	Total	Floor	Walls	Ceiling	Air Movers	Dehus	Air Movers Recommended
Bathroom	31 %	0 %	39 %	0 %	0	0	2
Closet 1	31 %	0 %	39 %	0 %	0	0	2
Closet 2	34 %	0 %	39 %	0 %	0	0	2
Dinning room	20 %	0 %	34 %	0 %	0	0	3
Entry hallway	23 %	0 %	34 %	0 %	0	0	2 - 3
Kitchen	29 %	0 %	45 %	0 %	0	0	3
Laundry room	26 %	0 %	34 %	0 %	0	0	2
Livingroom	17 %	0 %	34 %	0 %	0	1	3 - 4
Total	26 %	0 %	37 %	0 %	0	1	19 - 21



Christopher Skidmore unit 235

Claim #:

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Zone 1 Floor, Walls and Ceiling Square Footage

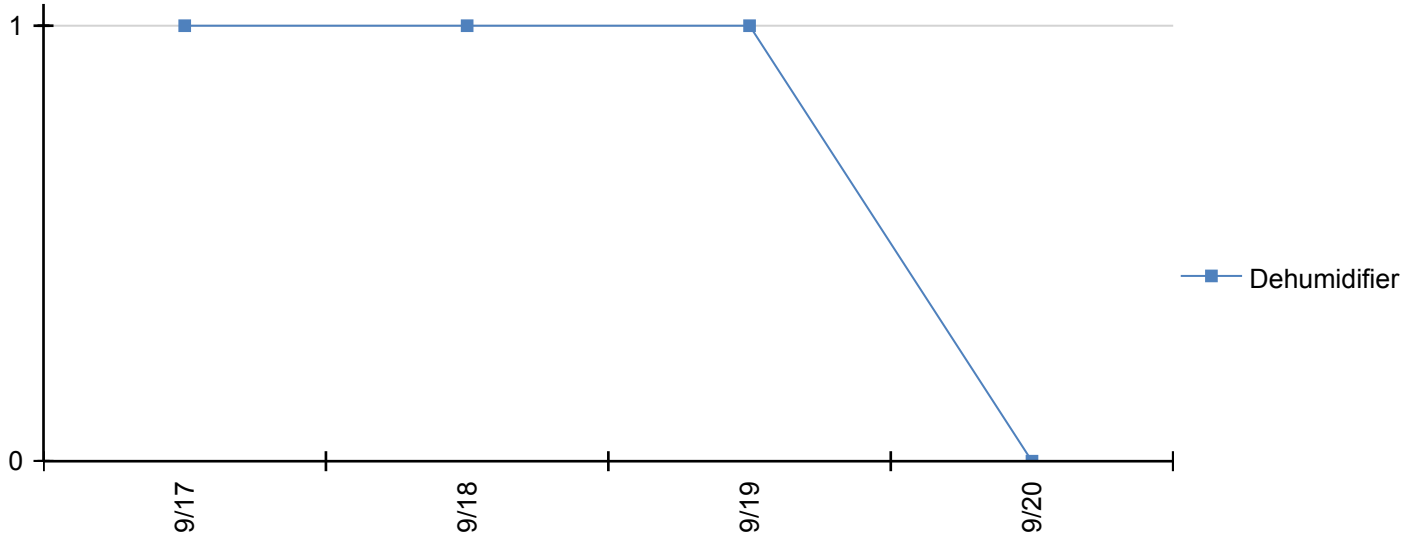
Room Name	Floor Square Footage			Wall Square Footage			Ceiling Square Footage		
	Affected	Offsets Insets	Missing Spaces	Affected	Offsets Insets	Missing Spaces	Affected	Offsets Insets	Missing Spaces
Bathroom	0.00	0.00	0.00	55.50	0.00	0.00	0.00	0.00	0.00
Closet 1	0.00	0.00	0.00	68.50	0.00	0.00	0.00	0.00	0.00
Closet 2	0.00	0.00	0.00	38.00	0.00	0.00	0.00	0.00	0.00
Dinning room	0.00	0.00	0.00	161.00	0.00	0.00	0.00	0.00	0.00
Entry hallway	0.00	0.00	0.00	129.00	0.00	0.00	0.00	0.00	0.00
Kitchen	0.00	0.00	0.00	158.67	0.00	0.00	0.00	0.00	0.00
Laundry room	0.00	0.00	0.00	63.00	0.00	0.00	0.00	0.00	0.00
Livingroom	0.00	0.00	0.00	223.50	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	897.17	0.00	0.00	0.00	0.00	0.00



Drawings

Zone Equipment Usage

Zone 1 Equipment Usage



Date	Room	Air Mover Count	Dehu Model	Dehu Rating	Asset No	Dehu Hour Counter
9/17/2017 8:38 AM Tech: We	Livingroom	0	7000XLI	130 PPD	NRH192	0
			1	130 PPD		0
9/18/2017 4:02 PM Tech: We	Livingroom	0	7000XLI	130 PPD	NRH192	0
			1	130 PPD		0
9/19/2017 9:28 AM Tech: We	Livingroom	0	7000XLI	130 PPD	NRH192	0
			1	130 PPD		0



Monitoring

Key

Blue	= GPP Equal To OR Above 65 on Day 2
Blue	= RH Equal To OR Above 40 on Day 2
Gray	= GPP Not Making Progress(Not Decreasing Daily)
Purple	= Zone Temp Outside Optimal Range for Equip (68 to 90)
Red	= Negative Grains Depression
Yellow	= Low or Zero Grains Depression

Atmospheric & Dehumidifier Readings

Zone 1

Atmospheric Readings	Outside			Unaffected			HVAC			Zone 1		
	Temp	RH%	GPP	Temp	RH%	GPP	Temp	RH%	GPP	Temp	RH%	GPP
9/17/2017 8:38 AM Tech: We	88.0	57.0	113	73.0	28.0	33				75.0	48.0	62
9/18/2017 4:02 PM Tech: We	88.0	63.0	125	70.0	25.0	27				83.0	22.0	37
9/19/2017 9:28 AM Tech: We	80.0	65.0	99	72.0	27.0	31				84.0	19.0	33
9/20/2017 8:55 AM Tech: We	88.0	65.0	129	77.0	20.0	27				84.0	18.0	31

Dehumidifier Readings	7000XLI NRH192				
	Temp	RH%	GPP	GDEP	Hrs
9/17/2017 8:38 AM Tech: We	100.0	17.0	48	14	0
9/18/2017 4:02 PM Tech: We	105.0	6.0	20	17	0
9/19/2017 9:28 AM Tech: We	101.0	2.0	6	27	0
9/20/2017 8:55 AM Tech: We	100.0	3.0	8	23	0



Christopher Skidmore unit 235

Claim #:

SERVPRO® Job #:

Moisture Content Readings

Zone 1

Room	Material	%/Pts	Goal	9/17 8:38a We	9/18 4:02p We	9/19 9:28a We	9/20 8:55a We
Bathroom	Wood - Framing/Stud	Pts	14	99	24	20	14
Closet 1	Wood - Framing/Stud	Pts	14	99	20	17	14
Closet 2	Wood - Framing/Stud	Pts	14	99	18	18	14
Dinning room	Wood - Framing/Stud	Pts	14	99	27	21	14
Entry hallway	Wood - Framing/Stud	Pts	14	99	33	15	14
Kitchen	Wood - Framing/Stud	Pts	14	99	18	22	14
Laundry room	Wood - Framing/Stud	Pts	14	99	38	20	14
Livingroom	Wood - Framing/Stud	Pts	14	99	36	18	14

Mike Arismendez
Chair

Thomas F. Butler
Vice Chair



Helen Callier
Rick Figueroa
Ravi Shah
Deborah A. Yurco

Mold Assessment Consultant
CHRISTOPHER L FELAN

License Number: MAC1278

The person named above is licensed by the Texas Department of Licensing and Regulation.

License Expires: February 25, 2020

Brian E. Francis
Executive Director

