AJ Environmental Consulting, Inc.
1002 Gemini Avenue, Suite 226
Houston, Texas 77058
(832) 284-4065
www.ajenvirocon.com

LIMITED RESIDENTIAL MOLD ASSESSMENT REPORT

PREPARED EXCLUSIVELY FOR:
Norman Burghardt

LOCATED AT:
15826 Wandering Trail
Friendswood, Texas 77546

PREPARED BY:
Julie Bruhn
Licensed Mold Assessment Consultant
#MAT1500

REPORT DATE:
May 2019

1.0 INSPECTOR INFORMATION

1.1 INSPECTOR

Karlin Higgins

Mold Assessment Technician license number MAT1260

Expiration: November 15, 2020

1.2 REVIEW

Rebecca Thomas

Mold Assessment Consultant license number MAC1540

Expiration: May 24, 2020

1.3 COMPANY LICENSURE

AJ Environmental Consulting, Inc.

Mold Consulting Company license number ACO1137

Expiration: February 6, 2020

2.0 SITE INFORMATION

2.1 STRUCTURE DESCRIPTION

2.1.1 **Structure Description**: One story home, three bedrooms, two full bathrooms, and slab on grade foundation.

2.2 INSPECTION DATE

2.2.1 **Initial inspection**: May 7, 2019

2.3 WEATHER CONDITIONS

2.3.1 **Sky Condition**: Cloudy

2.3.2 **Temperature**: 79°F

2.3.3 **Precipitation**: 60%

2.3.4 **Relative Humidity**: 79%

2.3.5 **Wind Direction and Speed**: Southeast, 10-20 miles per hour

3.0 PURPOSE AND SCOPE OF INSPECTION

3.1 PURPOSE OF INSPECTION

3.1.1 The purpose of this inspection is to determine the sources, locations, and extent of mold growth in the residence, and to determine the conditions that have caused mold growth.

3.2 CLIENT'S CONCERN(S)

3.2.1 The homeowner requested that a mold inspection for the purpose of obtaining a Certificate of Mold Damage Remediation be conducted prior to selling his home. This home was flooded during Hurricane Harvey and has since been remediated by general contractors

3.3 SCOPE OF INSPECTION

3.3.1 AJ Environmental will provide a complete visual inspection and collect necessary samples to determine whether or not mold is present in the ambient air of the home.

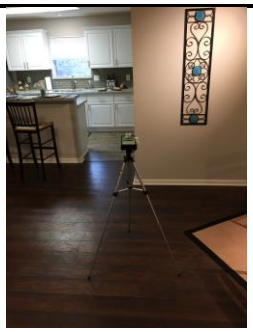
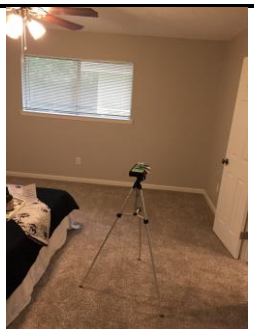
4.0 SAMPLE COLLECTION

4.1 EQUIPMENT USED

- ✓ Air sampling: Air samples are collected using a Zefon International Bio-Pump Plus and Allergenco sampling cassettes. The Bio-Pump Plus is calibrated to a flow rate of 15 liters per minute.
- Swab sampling: Swab samples are collected using sterile swabs stored in a buffer solution.
- Tape sampling: Tape samples are collected using Zefon International Bio-Tape slides with individual storage cases.
- ✓ Moisture Content: General® Pin-type LCD Moisture Meter
- ✓ Temperature and Humidity Measurements: Acu-Rite Humidity Reader
- Thermal Imager: Flir® Thermal Imager

4.2 SAMPLE COLLECTION

4.2.1

					
Sample Number: M19-112-2-1	**Sample Location:** Outdoor	**Sample Number:** M19-112-2-2	**Sample Location:** Dining Room	**Sample Number:** M19-112-2-3	**Sample Location:** Master Bedroom
Sample Volume (L): 75	**Sample Type:** Ambient Air	**Sample Volume (L):** 150	**Sample Type:** Ambient Air	**Sample Volume (L):** 150	**Sample Type:** Ambient Air

5.0 VISUAL OBSERVATIONS

5.1 VISIBLE MOLD: None observed.

5.2 SUSPECT MOLD: None observed.

5.3 DUST ACCUMULATION: Present in the exhaust of Bathroom 1.

5.4 STAINING: None observed.

6.0 ONSITE MEASUREMENTS

6.1 MOISTURE METER READINGS

According to industry standards, measurements that exceed 16.0% meet conditions for mold growth, and measurements that exceed 20.0% meet conditions for wood rot.

Room	Location in Room	Moisture Content (%)
Living Room	Below the window	13.0
Bedroom 2	Below the window	14.2
Master Bedroom	Below the window	15.2
Master Bathroom	Below the toilet	15.8

6.2 AMBIENT TEMPERATURE AND REALTIVE HUMIDITY READINGS

The Environmental Protection Agency recommends indoor humidity percentages to be less than 60% to prevent mold growth.

Room	Temperature (ºF)	Humidity (%)
Dining room	75	58
Living Room	75	58
Kitchen	75	58
Office	75	58
Laundry Room	75	58
Bathroom 1	75	58
Bedroom 1	75	58
Bedroom 2	75	58
Master Bedroom	75	58
Master Bathroom	75	58

7.0 RESULTS

7.1 AIR SAMPLING RESULTS

7.1.1 **Living Room (Ambient Air):** Results indicate no elevated concentrations.

7.1.2 **Master Bedroom (Ambient Air):** Results indicate no elevated concentrations.

8.0 CONCLUSION

At the time of this inspection, no visible mold was present. Ambient air samples were collected and analyzed by a certified, third party laboratory. Laboratory results do not indicate an elevated presence of mold.

Based on the visual and analytical results of this inspection, it appears that post-flooding treatment of this home has been effective. A Certificate of Mold Damage Remediation is attached to this report.

9.0 STATEMENT OF LIMITATIONS

This mold assessment report is based on the findings of a physical inspection of the residence and on laboratory analysis of samples collected from the same property. It addresses only those specific areas inspected and sampled. Findings are current and accurate for the date and time they were recorded but do not reflect expected or predictable mold growth and infestation on and within the property. AJ Environmental is not responsible or liable for the non-discovery of any water damage, water problems, mold contamination, or other conditions of the subject property which may occur or may become evident after the inspection and testing time and date. AJ Environmental is neither an insurer nor guarantor against water problems, mold problems, or other defects at the subject property. AJ Environmental makes no warranty, expressed or implied as to the fitness for use or condition of the systems or components inspected. AJ Environmental assumes no responsibility for the cost of repairing any water problems, mold problems or any other defects or conditions. Additional information may have been collected at the time of the inspection but is not included in the final report, per the client's request. AJ Environmental is not responsible or liable for any future water problems, mold problems, or any other future failures or repairs.

J3 Resources, Inc.
3113 Red Bluff Rd. Pasadena, TX 77503
Phone: (713) 290-0223 – Fax: (832) 831-5669
j3resources.com

Spore Trap Report - Total Airborne Fungal Spores

Rebecca Thomas
AJ Environmental Consulting, Inc.
1002 Gemini Ave., Suite 226
Houston, TX 77058

J3 Order #: JP191013033
Project #: M19-112
Receipt Date: 07-May-2019
Analysis Date: 10-May-2019
Report Date: 13-May-2019

Burghardt

Sample Number	M19-112-1			M19-112-2			M19-112-3		
Location	Outdoor			Dining Room			Master Bedroom		
Volume (liters)	75			150			150		
Debris Rank (0-5)	3			2			2		
Limit of Detection (Particles/m^3)	13			7			7		
Total Fungal Count (Spores/m^3)	**3870**			**300**			**87**		
INDIVIDUAL FUNGAL SPORE DETAIL									
	Raw Count	**Spores / m^3**	**%**	**Raw Count**	**Spores / m^3**	**%**	**Raw Count**	**Spores / m^3**	**%**
Alternaria	5	67	2	1	7	2			
Ascospores	79	1050	27	8	53	18			
Basidiospores	134	1790	46	6	40	13	3	20	23
Cercospora-like									
Chaetomium				1	7	2	1	7	8
Cladosporium	56	747	19	14	93	31	5	33	38
Curvularia				2	13	4			
Drechslera-like									
Epicoccum									
Fusarium									
Memnoniella									
Nigrospora	1	13	< 1						
Oidium									
Penicillium/Aspergillus-like				7	47	16	2	13	15
Pithomyces/Ulocladium									
Rust/Smuts/Myxomycetes/Perconia	2	27	< 1						
Spegazzinia									
Stachybotrys									
Tetraploa									
Torula									
Unidentified Spores									
Pyricularia	13	173	4	6	40	13	2	13	15
Totals	**290**	**3870**	**100**	**45**	**300**	**100**	**13**	**87**	**100**
MISCELLANEOUS PARTICLES DETAIL									
	Raw Count	**Particles / m^3**		**Raw Count**	**Particles / m^3**		**Raw Count**	**Particles / m^3**	
Hyphal Fragments	2	27		3	20		3	20	
Pollen	5	67		1	7				

Analyst: **Anh Phung**

Lee Poye **QA Officer**

These results relate only to the samples submitted and were received in acceptable condition unless stated otherwise. The laboratory is not responsible for concentrations which dependend on volume collected by non-laboratory personnel. Samples are analyzed according to J3 SOP# 7-03-2, which includes a 100% scan of the trace at 200X magnification and a minimum of 20% of the trace counted at 400X magnification. Debris rank indicates loading of particulates, both biological and non-biological, which may interfere with analysis. High debris rankings (4+) may obscure small spores and/or prevent the adherence of airborne particulates. Fungal counts on samples with high debris or 'overloaded' rankings should be regarded as minimal with actual counts being higher than reported. Blank corrections are not applied to data unless requested by the customer. LOD = Limit of Detection. N/A = Not Applicable.

ENVIRONMENTAL MICROBIOLOGY CHAIN OF CUSTODY

☐ Open Lab Fee

13033

Submitter Name:	**Bill to:** Julie Bruhn
Company: AJ Environmental Consulting, Inc.	**Address:** 1002 Gemini Ave
Address: 1002 Gemini Ave	Ste 226
Ste 226	**City/State:** Houston, Texas **Zip:** 77058
City/State: Houston, Texas **Zip:** 77058	**PO #:**

Project Information

Project Name: Burghardt	Project Manager: Rebecca Thomas
Project #: M19-112	Notification By: Email: ☑ Verbal: ☐ Text: ☐
Email Report To: rebecca@ajenvirocon.com	Email Invoice To: julie@ajenvirocon.com
Special Instructions:	

Turnaround Times – Please Select One

Emergency* ☐	1 Day ☐	2 Day ☐	3 Day ☑	5 Day ☒

Due to inability to meet TAT/mm

MOLD

Air Samples, Non-Culturable	Surface Samples, Non Culturable	Air & Surface Samples, Culturable
☒ Spore Trap Analysis (Air-O-Cell, Allergenco D) 3	☐ Direct Exam ○ Tape/Swab ○ Bulk/Dust	☐ Culture Plates (with Genius ID and Abundance)

BACTERIA

AIR	SURFACE/WATER
○ Total Count (TSA – TOTAL CFU's)	○ Total Coliforms / *E. Coli* (Presence/Absence)
○ Gram Negative Count (Maconkey – Total CFU's)	○ *Enterococcus sp.* (Presence/Absence)
○ Total & Gram Negative Count	○ *Legionella (Presence/Absence)* ○ *Legionella (MPN)*
○ Gram Stains and Counts	○ Other _____

SAMPLE INFORMATION

SAMPLE NUMBER	SAMPLE LOCATION / MATERIAL	VOLUME
M19-112-1	outdoor	75
M19-112-2	dining room	150
M19-112-3	master bedroom	150

Signatures

Relinquished By:	**Date:** 5/7/19 **Time:** 5:05
Received By:	**Date:** 5/7/19 **Time:** 5:10pm

** Emergency TAT requires prior lab notification. All samples analyzed outside normal business hours are charged at Emergency rate.*

MOLD DESCRIPTIONS

Acremonium is typically found in soil, dead organic debris, hay, and food, and is found indoors in widespread wet conditions. *Acremonium* is typically small white or pale shade of pink in color. Common allergens hay fever and asthma.

Alternaria is found in dead organics, on food surfaces, and on textiles. It can be transported by wind. *Alternaria* is a common fungus worldwide and can be commonly used for weed control. It can cause hay fever and asthma and may be pathogenic to open lesions. *Alternaria* is dark green and brown in color and can become velvety.

Ascospores are found everywhere naturally and can be frequently found indoors in damp conditions. Spores are predominantly discharged by large amounts of rain. *Ascospores* do not cause disease and the allergens have not be greatly studies. Some genera can sporulate in culture, while others have to have a plant host. *Ascospores* are very distinctive in appearance and can sometimes be enclosed in a gelatinous sheath or within a sack.

Basidiospores are a group of spores produced by over 1200 different types of fungi, including many mushrooms. They are common in urban areas and are often associated with gardens; wind typically disperses this type of spore. In indoor environments, *Basidiospores* are typically found on wood or cellulitic material, and certain species are known to be a cause of wood rot. Common allergens include hay fever or asthma.

Cercospora are parasites of higher plants, causing leaf spot. *Cercospora* are transported by the wind as a dry spore and are not seen indoor growth. Allergens are not studied. *Cercospora* are distinctive in identification and are not easily confused with other spores.

Chaetomium is one of the most common molds found in water-damaged buildings. They are strongly cellulolytic molds that can be found in soil, on paper, straw, cloth, cotton, damp-sheetrock, and other cellulose-containing substrates. It elicits an allergenic response in a moderate number of mold sensitive individuals. Common allergens include hay fever and asthma.

***Cladosporium* spp.** is common in indoor environments. This group of mold is the most common worldwide and occurs naturally throughout the Houston area. In outdoor environments, *Cladosporium* is associated with many types of soil, plant litter, and plant pathogens. In indoor environments, *Cladosporium* is typically found on moist windowsills, textiles, and wood. Common allergens include hay fever and asthma.

Curvularia is a very fast-growing type of mold. It is typically a plant pathogen but can also appear on indoor building materials. It can be transported by wind. *Curvularia* have large diameters, and spores can often remain in the nose or sinus after inhalation. Common allergens include hay fever, asthma, and fungal sinusitis.

Drechslera is a common allergen that is most often found in plant debris (particularly grasses) and soil. It can be transported by wind. *Drechslera* can be found on a variety of substrates where it has access to light and dark cycles. This mold tends to be dark gray or brown in color. Common allergens include hay fever, asthma, and fungal sinusitis.

Epicoccum is found in plant debris and can be transported by wind as a dry spore. Frequently *Epicoccum* is found in paper, textiles, and insects. It grows well in general fungal media and typically has an orange reverse pigment.

Fusarium is typically found in soil and is known to be a parasite for plants. It is commonly transported as a wet spore in water splash or by wind when dried out. It requires very wet conditions and grows well on all general media. The appearance of *Fusarium* can come in shades of pink, orange, or purple.

Gliocladium is commonly present in decaying vegetation and in soil. It is not typically found in air sampling due to the colonization of the structures. *Gliocladium* is most closely related to *Penicillium*, and no cases of infection have been reported in humans or animals.

Memnoniella is commonly found in plant litter and transported by the wind. This spore can be found on many substrates and is closely related to *Stachybotrys*. It can form dark grey colonies. They do not slime down but are held together in long chains.

Myxomycetes are found in decaying logs, commonly in forested regions. Wind disperses the dry fruiting spores, but it also has a wet spore phase that is not dispersed by wind. Occasionally, *Myxomycetes* are found indoors, but they do not grow on general fungal media. They are difficult to distinguish. Common allergens include hay fever and asthma.

Nigrospora is abundant in warm climates. It is commonly found in decaying plants. *Nigrospora* has an active discharge mechanism and does not need wind or rain to disperse. It is rarely found growing indoors. *Nigrospora* forms distinct large, dark brown spores.

Oidium/ Erysiphe are plant pathogens, causing powdery mildew to occur. They cannot grow on non-living environmental surfaces.

Paecilomyces is most found in soil and decaying plant material, but can be found indoors on food, PVC pipes, and timber wood. *Paecilomyces* is closely related to *Penicillium* and grows well on all fungal media. It is often transported by wind and allergens include hay fever, asthma, and hypersensitivity pneumonitis. Human disease from *Paecilomyces* is very rare.

***Penicillium* and *Aspergillus* spp.** are included as one group due to similarities in the appearance of their spores and growth patterns. They are often associated with house dust but may also be found growing on cellulitic materials such as sheetrock and wood in water damaged buildings. These mold genera are often the first to colonize an area and are marked by rapid spore production and colony growth. *Aspergillus* if found in soil, compost piles, and stored grain. Commonly found in a wide range or indoor areas. Transported by the wind. *Penicillium* found in decaying plant debris and fruit rot. Transported by wind or insects. Wide spread, commonly grows in wallpaper, moist chip boards. Mutant strains of Penicillium are utilized to produce the antibiotic Penicillin. Common allergens include hay fever, asthma, and allergic fungal sinusitis.

Perconia is a general category for common molds associated with living or decaying plants and wood. *Rust, Smuts, Myxomycetes*, and *Perconia* spp. are disseminated by wind and can be found indoors, though they rarely colonize such areas.

Pithomyces/Ulocladium are included as one group due to similarities in the appearance of their spores and growth patterns. *Pithomyces* is typically a slow growing mold, but can grow more rapidly in warm, moist environments. *Ulocladium* found indoors are associated with high moisture and can be found on sheetrock, paper, and other straw materials. *Ulocladium* is found on paint, tapestries, and sheetrock. Transported by the wind. Grows well on general fungal media. Distinctive brown spores. Is a common airway allergen and can affect allergies such as hay fever and asthma; it is considered one of the most common mold allergens in the United States.

Rust/Smuts/Myxomycetes are found in living plant materials. They have both wet and dry spores and do not grow indoors unless their hosts plants are present, due to their nature of being a parasitic. Common allergens include hay fever and asthma. *Smuts* commonly found on cereal crops and flowering plants. They are transported and dispersed by wind. *Smuts* do not usually grow indoors as they are parasitic in nature. Common allergens include hay fever and asthma. *Myxomycetes* are found in decaying logs, commonly in forested regions. Wind disperses the dry fruiting spores, but it also has a wet spore phase that is not dispersed by wind. Occasionally, *Myxomycetes* are found indoors, but they do not grow on general fungal media. They are difficult to distinguish. Common allergens include hay fever and asthma.

Scopuariopsis is a large genus that consists of molds common with soil. This mold type is commonly found growing indoors on food surfaces and on materials such as drywall paper and wood. While not much is known about this mold type, certain species may have a link to onychomycoses or pulmonary mycoses.

Spegazzinia is a small proportion of the fungal biota. It is similar to Candelabrum, and it is not commonly found growing indoors. It is commonly found in many kinds of soils and trees. No known human effects exist.

Stachybotrys grows well on cellulose based materials such as wallpaper, wood, plaster board, and building materials. Has a wet spore can be transported by insects, water splash, and win when dried out. *Stachybotrys* is a slow-growing fungus and does not compete well with faster growing fungi. *Stachybotrys* also produces mycotoxins that are toxic to humans and can inhibit the production of proteins.

Tetraploa is a very small proportion of fungal material. Spores are very distinctive and are easy to identify, but rare. It occurs naturally on leaves and stems just above soil. No information about health affects are available.

Torula is found most frequently in temperate regions. It can be found in soil, dead stems, ground nuts, and oats. Dry spores are typically carried by the wind. It is commonly found indoors on cellulose containing material such as old sacking, wicker, straw baskets, and paper, and it grows vegetative on fungal media. *Torula* is not commonly confused for other genera as it is distinctive and readily identifiable.

References:

“Fungal Library.” *EMLab P&K: A TestAmerica Company*, 2018, www.emlab.com/resources/fungal-library/.

TEXAS DEPARTMENT OF INSURANCE
Regulatory Policy Division - Property and Casualty Lines Office (104-PC)
333 Guadalupe, Austin, Texas 78701 ★ PO Box 149104, Austin, Texas 78714-9104
(512) 676-6710 | F: (512) 490-1014 | (800) 578-4677 | TDI.texas.gov | @TexasTDI

Print

CERTIFICATE OF MOLD DAMAGE REMEDIATION

Certificate Number M19112 **Date of Issuance** May 15, 2019

Name Selective Property Inc.

Mailing Address PO Box 580522

City Houston State Texas Zip 77258-0522

Property Description:

Number 15826 Street Wandering Trail Lot 2 Block 12

Addition or Tract Wedgewood Village Sec 3 City Friendswood County Harris

SIGN APPROPRIATE CERTIFICATION

Mold Assessment Consultant License Holder Certification

- I hereby certify that based on visual, procedural and analytical evaluation, the mold contamination identified for this project has been remediated as outlined in the mold management plan or remediation protocol.
- I further certify with reasonable certainty that the underlying cause or causes of the mold that were identified for this project in the mold management plan or remediation protocol have been remediated. A copy of the written evaluation that forms the basis for my certification has been provided to the person named in this certificate.

Mold Assessment Consultant License Holder Signature	Texas Department of Licensing and Regulation License No. and Expiration Date	Date

Mold Remediation Contractor License Holder Certification

- I hereby certify that I completed mold remediation on this project and will provide the mold remediation certificate to the property owner no later than the 10th day after the date of completion.

Mold Remediation Contractor License Holder Signature	Texas Department of Licensing and Regulation License No. and Expiration Date	Date of Completion

OR

Mold Assessment Consultant or Adjustor License Holder Certification

- I hereby certify that I have inspected the property described in this certificate and that based on my inspection I have determined that the property does not contain evidence of mold damage. A copy of the written evaluation that forms the basis for my certification has been provided to the person named in this certificate.

Mold Assessment Consultant/Adjustor License Holder Signature	Texas Department of Licensing and Regulation License No. and Expiration Date	Date
	MAC 1500 Expiration: 01/25/2020	05/15/2019