

REQUEST FOR QUOTES

CITY OF BRUNSWICK CDBG Issued October 12, 2023

The City of Brunswick, Georgia is requesting quotes from eligible businesses to conduct Mold Remediation for a federally funded project at St. Mark's Towers. St. Mark's Towers is a non-profit residence for low-income singles, couples and disabled persons ages 62 and above. Located at 1 Tower Plaza, Brunswick, GA 31520, the facility has two six-story structures containing a total of 150 one-bedroom apartments. The apartments are fully occupied, so the contractor must plan and coordinate work schedule to provide minimal disruption to residents.

This is a request for quotes, not a formal bid process. In accordance with its procurement policies, the City of Brunswick (COB) may move forward with contracting services at any time after a minimum of three satisfactory quotes have been received. Please respond to rgeorge@cityofbrunswick-ga.gov with your quote, including the information requested at the end of this document.

Please note that sections in this request for quotes are identified under the bookmarks for this pdf.

Background

The COB's Community Development Block Grant – Disaster Recovery (CDBG-DR) program provides repairs and reconstruction for eligible housing in the 31520 zip code that has unrepaired damage from 2017's Hurricane Irma. This is a Housing and Urban Development (HUD) grant-funded program. The Georgia Department of Community Affairs (DCA) is the program grantee; the City of Brunswick (COB) is a program sub-recipient and is responsible for oversight of the St. Mark's Tower project.

St. Marks Towers experienced damage during Hurricane Irma (2017). The COB was allocated CDBG-DR funds to replace windows and PTAC units at the facility. To fulfill the requirements of the Grant, the COB requested a mold assessment of the windows and walls associated with the PTAC units that will be replaced through the CDBG-DR program.

GLE Associates, Inc. (GLE) conducted a limited mold assessment on August 21 and 22, 2023, within St. Mark's Towers, to determine if mold amplification was present in response to previous storm driven water intrusion. GLE's report is attached here; its findings and recommendations for remediation are the basis of the scope of work for which quotes are being requested. Some of its

recommendations are not included in this scope of work as they will be addressed through construction and pre-construction activities. Issues are identified in Section 4.0 Findings, Table 4.1-1-Summary of Water/Mold Damage and Table 4.3-1-Summary of Particulate Surface Sampling starting on page 3 (actual page 6) of the report.

Arrangements can be made to visit the facility-contact Roxane George at 912-2792626 or rgeorge@cityofbrunswick-ga.gov.

Scope of Work

Quote should include costs of providing to COB all of the following services ("Services"). Please note that the construction project that will follow this mold remediation will remove and replace the window units for all 150 (approximate) residential spaces and the windows in the stair wells and common areas of the buildings. PTAC units are slated for removal and replacement as well. For a more detailed description of the rehabilitation project to take place after mold remediation, see the draft RFP at: <u>221005</u> - rfp for building contractor.pdf.

For this reason, only the level of mold remediation needed to address immediate-short-term health and safety concerns is needed for the windows, PTAC units and surrounding and ancillary materials. Except for these items, the scope of work is as follows:

1. All building materials identified in Table 4.1-1 of the GLE report should be properly remediated in accordance with the remediation recommendations presented in **Appendix B** - **Remediation Recommendations**.

2. All non-porous building materials (such as wood, metal, glass, tile, painted plaster, plastic, etc.) exhibiting surficial mold growth and/or particulate accumulation should be properly cleaned by a qualified mold remediation contractor utilizing damp-wiping and HEPA-vacuuming techniques.

During remediation/cleaning activities, HEPA-filtered negative air machines should be operated in the re-circulation mode (scrubbing) to continuously filter the air within the identified portions of the site. The air scrubbing equipment should be relocated periodically to enhance the entrainment and subsequent filtration of airborne fungal spores within the identified portions of the site. Additionally, all horizontal surfaces within the identified portions of the site should be HEPA vacuumed and damp (not wet) wiped.

All porous building materials (such as upholstered furniture, linens, window treatments, carpet, etc.) exhibiting surficial mold growth should properly cleaned or laundered. Materials exhibiting mold growth following cleaning should be discarded.

3. HEPA-filtered negative air machines should be operated in the re-circulation mode (scrubbing) to continuously filter the air within the identified portions of the site. The air scrubbing equipment should be relocated periodically to enhance the entrainment and subsequent filtration of airborne fungal spores within the identified portions of the site. Additionally, all horizontal surfaces within the identified periodical be HEPA vacuumed and damp (not wet) wiped.

Appendix B - Remediation Recommendations (edited by COB).

In work areas where no visible microbial growth was identified, a controlled pressure enclosure area is not required.

If mold growth is identified at any time during the cleaning and/or removal of the moisture impacted building materials, then the area must be handled as containing mold growth and all control mechanisms recommended for mold affected building materials should be immediately implemented.

If mold growth is not identified during the removal of the moisture impacted building materials, then the mitigation of these areas should continue under normal construction procedures.

3. Building materials identified as **water stained only** should be appropriately cleaned and dried (below 20% MC/WME). Following appropriate cleaning and verification of acceptable moisture content, the surface area may be primed and/or painted. If appropriate cleaning cannot be achieved, the materials may need to be removed and replaced.

4. Properly remove and dispose of all mold and water damaged porous building materials identified in **Table 4.1-1**.

5. Non-porous diffusers and return grilles, appliances, furniture, boxes and other miscellaneous items in remediation work areas should be thoroughly cleaned/scrubbed using wet-wipe cleaning utilizing a two-towel system with a microbial biocide agent and vacuums utilizing HEPA filters. [PTAC units will be removed during construction and should be treated as temporary]

6. Porous furniture and/or other miscellaneous items in remediation work areas should be evaluated on an individual basis. In most cases, these items can be thoroughly cleaned/scrubbed using wet methods utilizing a microbial biocide agent and vacuumed utilizing a vacuum system with HEPA filters.

7. Exposed wall, floor and/or ceiling components should be thoroughly cleaned/scrubbed using wet methods utilizing a microbial biocide agent and vacuumed utilizing a vacuum system with HEPA filters.

8. Any wood components of the exposed walls and ceilings should be sealed with an appropriate sealant after following the cleaning protocol and allowing sufficient drying time (components should have a moisture level of less than 12%). The sealant should not contain Linseed Oil.

9. Additional mold affected materials may be discovered during remediation activities conducted at the site and should be addressed upon discovery.

10. All mold remediation activities should be conducted in a controlled pressure enclosure utilizing HEPA filtration. The intent is to isolate the remediation work area(s) to prevent dispersion of mold spores to unaffected areas of the structure. Activating any HVAC systems during any remediation activities should be avoided.

11. If air sampling indicates that bio-amplification of microbial spores is occurring, then HEPAfiltered negative air machines should be operated in the re-circulation mode (scrubbing) to continuously filter the air within the identified portions of the structure. The air scrubbing equipment should be relocated periodically to enhance the entrainment and subsequent filtration of airborne fungal spores within the identified portions of the structure. Additionally, all horizontal surfaces within the identified portions of the structure should be HEPA vacuumed and damp (not wet) wiped.

12. All work must be performed in strict accordance with all federal, state, and local regulations and ordinances using experienced and trained personnel.

Quotes should include the following:

Quoted price to complete scope of work _____

A brief description of your/your business's experience, qualifications and current capacity to do this work.

When can you start?

How much time will it take to complete?

Business Contact information:

Business Name

Contact Name

Phone

Address

Email

Please respond as soon as possible to <u>rgeorge@cityofbrunswick-ga.gov</u>

LIMITED MOLD & INDOOR AIR QUALITY ASSESSMENT

St. Mark's Towers 1 Tower Plaza Brunswick, Georgia 31520

GLE Project No.: 23000-27090

Prepared for:

Ms. Roxane George CDBG-DR Manager City of Brunswick 601 Gloucester Street Brunswick, Georgia 31520

September 2023

Prepared by:



8651 Baypine Road, Suite 115 Jacksonville, Florida 32256 904-296-1880 • Fax 904-296-1860 Limited Mold & Indoor Air Quality Assessment

Conducted at:

St. Mark's Towers 1 Tower Plaza Brunswick, Georgia 31520

GLE Project No.: 23000-27090

Prepared for:

Ms. Roxane George CDBG-DR Manager City of Brunswick 601 Gloucester Street Brunswick, Georgia 31520

Issue Date: Septepmber 27, 2023

Ryan Hendry **Project Manager** Signature

Michael B. Collins, CIH, CSP, CIEC Principal Certified Industrial Hygienist

Prepared by:

GLE Associates, Inc. 8651 Baypine Road, Suite 115 Jacksonville, Florida 32256 Phone 904-296-1880 Facsimile 904-296-1860

Signature

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1.0 INTRODUCTION

At the request of City of Brunswick (COB), GLE Associates, Inc. (GLE) conducted a limited mold assessment on August 21 and 22, 2023, within the St. Mark's Towers, located at 1 Tower Plaza, in Brunswick, Georgia. The objective of this assessment was to determine if mold amplification was present in response to previous storm driven water intrusion. The scope of this assessment was limited to the windows and walls associated with the Packaged Terminal Air Conditioner (PTAC) units in the facility. Specifically, the scope of services included the following:

- Limited Visual Assessment and Moisture Measurements
- Temperature, Relative Humidity, Carbon Dioxide, and Carbon Monoxide Measurements
- Microbial Surface Sampling

Consequently, this report is limited to the specified scope of services. While additional comments may be provided, the additional comments are submitted as a courtesy and are not intended to expand the original scope of this investigation. This report outlines the background information, our procedures and methodology, sample results, findings, conclusions, and recommendations.

2.0 BACKGROUND

The St. Marks Towers facility received storm-driven damage from Hurricane Irma (2017). The COB obtained a Community Development Block Grant – Disaster Recovery (CDBG-DR) to fund the necessary renovation and repairs at the housing facility. To fulfill the requirements of the Grant, the COB has requested an assessment of the windows and walls associated with the PTAC units that will be replaced through the CDBG-DR program.

3.0 PROCEDURES AND METHODOLOGY

3.1 Limited Visual Assessment and Moisture Measurements

GLE assessed immediately accessible, interior areas of the subject building for visual evidence of water and/or mold-impacted materials, including, but not limited to, building materials exhibiting visible water staining, water damage, mold growth, and/or elevated moisture content. Non-destructive visual observations were utilized for this task.

A FLIR Systems Model E-40 and/or Model C2 infrared thermal camera was utilized to scan readily accessible interior areas of the subject facility for indications of thermal anomalies indicating potential elevated moisture content. Moisture content measurements were confirmed with a hand held moisture meter, a GE Protimeter SurveyMaster or equivalent instrument. The moisture meter was utilized to collect moisture measurements from areas exhibiting visible water intrusion. Elevated moisture measurements, greater than or equal to 20% Wood Moisture Equivalent (WME) or Moisture Content (MC), may

be an indication of previous or active water intrusion, and may provide an environment favorable for fungal proliferation.

3.2 Comfort Parameter Measurements

Temperature and relative humidity measurements were obtained with a VelociCalc Indoor Air Quality Meter manufactured by TSI. Carbon dioxide (CO2) and Carbon Monoxide (CO) was measured with a dual-wavelength non-dispersive infrared sensor, with results reported in parts per million (ppm). Temperature was measured with a thermistor sensor, with results reported in degrees Fahrenheit (°F). Relative humidity (Rh) was measured with a thin film capacitive sensor, with results reported in percent (%).

Currently, the Occupational Safety and Health Administration (OSHA) has no regulations specifically addressing temperature and humidity in an office setting; however, OSHA recommends temperature control in the range of 68-78°F and humidity control in the range of 30%-60%. Additionally, the Environmental Protection Agency (EPA) and the American Conference of Governmental Industrial Hygienists (ACGIH) have published guidelines referencing maintaining relative humidity at levels below 60% as a mold preventive measure.

Carbon dioxide levels may be used as an indicator of sufficient outside air intake, treatment and distribution. Concentrations of carbon dioxide in the exterior environment fluctuate between 300 and 450 ppm. Inside concentrations of carbon dioxide may typically range between 500 and 2000 ppm depending on the rate of exchange for indoor air, the occupant loading, and the demand within a space. A buildup of CO₂ can lead to complaints of headaches and lethargy from occupants of the building. General discomfort, malaise, and increased perception of bodily odors have been observed when concentrations significantly exceed outdoor concentrations for extended periods.

When using the air quality approach, ASHRAE 62.1-2016 stipulated that in an effort to ensure adequate ventilation, indoor carbon dioxide levels should not exceed 700 ppm over outdoor concentrations. The OSHA Eight hour Time Weighted Average (TWA) Permissible Exposure Limit (PEL) is 5000 ppm. These concentrations may periodically fluctuate, and attention should focus on responsible factors such as improperly functioning control equipment, periods of increased occupation, and environmental conditions.

Carbon monoxide (CO), also referred to as carbon oxide or flue gas, is an odorless, tasteless, and colorless gas that is a byproduct of incomplete combustion (i.e.: vehicle exhaust, stoves, fireplaces, tobacco smoke, gas appliances, heaters, etc.). CO has a much greater affinity for hemoglobin than does oxygen. As a result, CO readily bonds with hemoglobin forming carboxyhemoglobin, which reduces the hemoglobin available to transport oxygen throughout the body, thereby acting as an asphyxiant. Common symptoms of exposure include dizziness, dull headache, nausea, ringing in the ears, and

pounding of the heart. Elevated exposure to CO may induce unconsciousness at which point damage to the central nervous system, the brain, and the circulatory system may occur. Acute exposure can be fatal. Young children and persons with asthma, anemia, heart and hypermetabolic diseases are particularly susceptible.

The National Ambient-Air Quality Standard (NAAQS), a primary for carbon monoxide in the outdoor air as established by the Environmental Protection Agency (EPA), is 40 mg/m³ (35 ppm) in a one hour period and 10 mg/m³ (9 ppm) over an eight hour period, not to be exceeded more than once per year. The industrial workplace standards for CO, as established by OSHA and ACGIH are 50 ppm eight-hour TWA and 25 ppm TLV TWA, respectively. Mean CO concentrations in non-industrial indoor environments (excluding garages and other automobile service facilities) range from 1.2 to 4.2 ppm.

The OSHA PEL for Carbon Monoxide is 50 parts per million (ppm). OSHA standards prohibit worker exposure to more than 50 ppm parts of air averaged during an 8-hour time period.

3.3 Particulate Surface Sampling

Particulate surface samples were collected of assumed mold growth to identify the genus, growth stage (spores, intact hyphae, hyphae fragments, etc.), and to estimate the density and/or potential spread at the time of sampling. The samples were delivered, under strict chain-of-custody, to EMSL, an AIHA EMLAP/A2LA-accredited laboratory, for viable and non-viable mold spore analysis. Semi-quantitative results were reported as counts of fungal structures, to include spores, hyphae, and other particulates. See **Appendix A** for laboratory analytical results.

4.0 FINDINGS

4.1 Limited Visual Assessment and Moisture Measurements

GLE performed a walkthrough visual assessment of accessible areas of concern within the scope of work. The assessment identified water and/or mold impacted materials, including, but not limited to, building materials exhibiting visible water staining, water damage, and/or mold growth. Visual observations are outlined in Table 4.1-1 – Summary of Water/Mold Damage.

TABLE 4.1-1 – SUMMARY OF WATER/MOLD DAMAGE St. Mark's Towers 1 Tower Plaza Brunswick, Georgia						
Area Damage Type		Location	Building Material	Approx. Quantity* (H'xL')	%WME	
603-North	MG	Living Room Window Ledge	Wood/Caulk	3 LF	< 20	
		Living Room Wall (Below Window)	Drywall	2'x6'	22.5	

TABLE 4.1-1 – SUMMARY OF WATER/MOLD DAMAGE							
	St. Mark's Towers						
	1 Tower Plaza Brunswick, Georgia						
Area	Damage			Approx. Quantity* (H'xL')	%WME		
605-North	MG	Living Room Window Ledge	Wood/Caulk	10 LF	< 20		
608-North	MG	Living Room Window Wall	Cove Base	12 LF	< 20		
612-North	WS	Living Room Wall (behind PTAC)	Drywall	6 LF	< 20		
614-North	WS	Living Room Floor (by Window)	Carpet	36 SF	< 20		
513-North	WD	Living Room Wall (behind PTAC)	Drywall	3'x6'	45.0		
511-North	WD	Living Room Floor (by PTAC)	Carpet	36 SF	40.2		
511-North	WD	Living Room Wall (behind PTAC)	Drywall	3'x6'	44.3		
512-North	MG	Living Room Wall (behind PTAC)	Drywall	4 SF	< 20		
510-North	MG	Living Room Wall (behind PTAC)	Drywall	2 SF	< 20		
508-North	WD	Living Room Wall (behind PTAC)	Drywall	3'x10'	20.5		
507-North	MG	Living Room Window Ledge	Wood/Caulk	3 LF	< 20		
503-North	WD	Living & Bedroom Floor	Carpet	300 SF	48.6		
501-North	MG	Living Room Window Ledge	Wood/Caulk	4 LF	< 20		
405-North	WD	Living Room Wall (behind PTAC)	Drywall	3'x4'	24.5		
407-North	WD	Bedroom Wall (near PTAC Vent)	Drywall	4 LF	21.5		
407-North	MG	Bedroom Window Ledge	DW/Wood	24 LF	< 20		
409-North	WD	Bedroom Wall (below PTAC vent)	Drywall	1 SF	24.1		
306-North	WD	Bedroom Wall (below PTAC vent)	Drywall	1 SF	36.5		
202-North	WD	Living Room Ceiling	Texture	4 LF	< 20		
204-North	WD	Living Room Window Wall (corner opposite PTAC)	Drywall	2'x2'	46.5		
208-North	WD	Living Room Window Wall	Drywall	3'x12'	31.3		
206-North	WD	Living Room Wall (behind PTAC & duct)	Drywall	3'x6'	22.9		
214-North	MG/WD	Living Room Wall (behind PTAC)	Drywall	3'x5'	41.3		
102-North	MG	Living Room Wall (behind PTAC)	Drywall	3 LF	< 20		
104-North	WD	Bedroom Window Wall (lower West Wall)	Drywall	3'x1'	21.9		
104-North	WD	Bedroom Ceiling	Texture	4 SF	< 20		
107-North	WD	Living Room Wall (East corner behind PTAC)	Drywall	2'x1'	27.9		
108-North	WD	Bedroom Window Wall	Drywall	3'x12'	22.4		
106-North	WD	Living Room Window Wall	Drywall	3'x12'	23.6		
106-North	WD	Bedroom Window Wall	Drywall	3'x12'	25.5		
109-North	MG	Living Room Wall (behind PTAC)	Drywall	2 SF	< 20		
110-North	WD	Living Room Wall (behind PTAC)	Drywall	5 LF	21.5		
603-South	WD	Bedroom East Wall (below PTAC vent)	Drywall	4 SF	99.9		
603-South	WD	Living Room West Wall (by PTAC Duct)	Drywall	2 SF	26.4		
604-South	WD	Living Room Wall (behind PTAC)	Drywall	3'x5'	30.6		
605-South	WD	Living Room Floor (by PTAC)	Carpet	10 SF	57.9		
608-South	WD	Living Room Wall (South of PTAC)	Drywall	1 SF	21.6		
609-South	WD	Living Room Wall (behind PTAC)	Drywall	3'x5'	24.2		

	TABLE 4.1-1 – SUMMARY OF WATER/MOLD DAMAGE						
	St. Mark's Towers						
	1 Tower Plaza						
Area	Damage Type	Brunswick, Georgia Location	Building Material	Approx. Quantity* (H'xL')	%WME		
611-South	WD	Living Room Wall (behind PTAC)	Drywall	2 SF	25.4		
502-South	WD	Living Room Wall (behind PTAC)	Drywall	3'x5'	21.2		
504-South	WD	Living Room Wall (behind PTAC)	Drywall	3'x5'	21.1		
505-South	WD	Bedroom West Wall (by PTAC vent)	Drywall	2 SF	23.7		
509-South	WD/MG	Living Room Window Wall & East Wall behind PTAC	Drywall	3'x7'	41.6		
412-South	WD	Living Room Wall (behind PTAC)	Drywall	3'x5'	28.7		
410-South	WD	Living Room Window Wall	Drywall	3'x10'	22.4		
410-South	WD	Bedroom West Wall (PTAC Vent)	Drywall	1 SF	20.1		
409-South	WD	Living Room Wall (behind PTAC)	Drywall	3'x5'	22.7		
409-South	MG	Bedroom West Wall (PTAC Vent)	Drywall	3 LF	< 20		
402-South	WD	Living Room Wall (behind PTAC)	Drywall	3'x5'	20.1		
3 rd South	WD	Central Lobby Hall Southeast Column by Window	Drywall	4 SF (Upper)	33.2		
301-South	WD	Flooring	Carpet/Tile	Entire Unit	33.2		
304-South	WD	Living Room Window Wall	Drywall	3'x10'	27.8		
306-South	WD	Living Room Wall (behind PTAC)	Drywall	3'x5'	20.1		
310-South	WD	Living Room Window Wall & East Wall (behind PTAC)	Drywall	3'x7'	25.8		
311-South	WD	Bedroom West Wall PTAC Vent	Drywall	2 SF	25.6		
311-South	WD	Living Room Window Wall & East Wall (behind PTAC)	Drywall	3'x7'	76.7		
2 nd -South	WD	Central Lobby Hall, S.E. Column	Drywall	1'x4'	21.2		
202-South	WD/MG	Living Room Wall (behind PTAC)	Drywall	3'x5'	24.2		
202-South	WD	Flooring	Carpet/Tile	Entire Unit	39.8		
203-South	WD	Living Room Window Wall (East)	Drywall	3'x5'	21.2		
204-South	WS	Living Room Floor by PTAC	Carpet	15 SF	< 20		
205-South	WD	Bedroom West Wall (by PTAC vent)	Drywall	1 SF	24.5		
205-South	WD	Living Room Window Wall & East Wall (behind PTAC)	Drywall	3'x7'	23.8		
209-South	WD/MG	Living Room Wall (behind PTAC)	Drywall	3'x5'	70.8		
210-South	WD	Living Room Window Wall & East Wall (behind PTAC)	Drywall	3'x7'	20.1		
101-South	WD	Living Room Window Wall	Drywall	1'x10'	20.5		
101-South	WD	Flooring	Carpet/Tile	Entire Unit	47.3		
102-South	WD	Living Room Window Wall – East	Drywall	2'x2'	52.3		
102-South	WD	Living Room Wall – West by PTAC Duct	Drywall	2 SF	42.5		
103-South	WD	Living Room Window Wall & West Wall behind PTAC	Drywall	3'x7'	45.6		
103-South	WD	Bedroom East Wall by PTAC vent	Drywall	1 SF	20.5		
104-South	WD	Living Room Window Wall & West Wall behind PTAC	Drywall	3'x7'	45.6		

TABLE 4.1-1 – SUMMARY OF WATER/MOLD DAMAGE St. Mark's Towers 1 Tower Plaza Brunswick, Georgia							
Area	Damage Type	Location	Building Material	Approx. Quantity* (H'xL')	%WME		
104-South	WD	Bedroom East Wall by PTAC vent	Drywall	1 SF	47.3		
105-South	WD	Living Room Window Wall & East Wall behind PTAC	Drywall	3'x7'	42.4		
105-South	WD	Bedroom West wall by PTAC vent	Drywall	1 SF	22.0		
106-South	WD	Bedroom West wall by PTAC vent	Drywall	1 SF	20.4		
106-South	WD	Living Room Window Wall & East Wall	Drywall	3'x12'	35.4		
107-South	WD	Living Room Window Wall & West Wall behind PTAC	Drywall	3'x7'	22.7		
108-South	WD	Living Room Window Wall & West Wall behind PTAC	Drywall	3'x7'	36.4		
109-South	WD	Living Room Window Wall & East Wall corner behind PTAC	Drywall	2'x2'	95.8		
110-SouthWDLiving Room Window Wall & East Wall corner behind PTAC		Drywall	2'x2'	99.9			
Shop MG Window Wall (S.E. Corner) Drywall 3'x3' < 20							
 * Approximate quantities listed as height in feet by length in feet, unless otherwise noted WS – Water-Stained WD – Water-Damaged MG – Mold Growth SF – Square Feet LF – Linear Feet %WME – % Wood Moisture Equivalent 							

4.2 Comfort Parameter Measurements

During the assessment, multiple temperature, relative humidity, CO₂ and CO measurements were obtained from throughout the subject area. The measurements are included in Table 4.2-1: Summary of Comfort Parameter Measurements.

TA	TABLE 4.2-1 – SUMMARY OF COMFORT PARAMETER MEASUREMENTS					
		St. Mark'				
		1 Towe				
		Brunswick	k, Georgia			
Date	Location	Temperature	Relative	Carbon	Carbon	
Date	Location	(°F)	Humidity (%)	Dioxide (ppm)	Monoxide (ppm)	
		North '	Tower			
8/21/23	Exterior	84.7	71.0	365	0.0	
8/21/23	601-North	77.3	58.2	962	0.2	
8/21/23	602-North	76.3	56.5	921	0.4	
8/21/23	603-North	77.4	67.6	1061	0.2	
8/21/23	604-North	79.2	73.6	755	0.2	
8/21/23	605-North	77.3	57.8	531	0.2	
8/21/23	606-North	76.2	70.1	855	0.2	
8/21/23	607-North	76.3	57.7	781	0.2	
8/21/23	608-North	76.8	64.6	765	0.3	
8/21/23	609-North	77.0	49.1	1093	0.2	
8/21/23	610-North	75.7	43.2	1273	0.8	
8/21/23	611-North	75.2	47.6	1090	0.6	

TA	TABLE 4.2-1 – SUMMARY OF COMFORT PARAMETER MEASUREMENTS							
		St. Mark'						
	1 Tower Plaza							
	Brunswick, Georgia							
Date	Location	Temperature	Relative	Carbon	Carbon			
		(°F)	Humidity (%)	Dioxide (ppm)	Monoxide (ppm)			
9/21/22	(12 N. 4)	North		079	0.2			
8/21/23	612-North	75.4	59.6	978	0.3			
8/21/23	613-North	74.2	62.3	778	0.2			
8/21/23	614-North	75.9	70.3	917	0.2			
8/21/23	6 th Hall-North	79.1	59.1	575	0.2			
8/21/23	514-North	78.8	56.7	848	0.2			
8/21/23	513-North	79.4	77.5	1167	0.2			
8/21/23	511-North	78.9	66.3	1116	0.4			
8/21/23	512-North	76.9	47.8	995	0.2			
8/21/23	510-North	78.1	67.8	960	0.2			
8/21/23	509-North	76.7	62.1	593	0.2			
8/21/23	508-North	77.3	59.5	948	0.3			
8/21/23	507-North	74.7	56.7	904	0.1			
8/21/23	506-North	75.9	79.2	1234	0.2			
8/21/23	505-North	76.9	68.6	938	0.1			
8/21/23	504-North	76.3	72.0	889	0.2			
8/21/23	503-North	77.1	59.7	958	0.1			
8/21/23	502-North	76.8	57.3	834	0.4			
8/21/23	501-North	76.4	45.2	1146	0.3			
8/21/23	5 th -North Hall	81.3	59.2	556	0.2			
8/21/23	401-North	76.3	52.7	1045	0.2			
8/21/23	402-North	76.7	68.5	1136	0.2			
8/21/23	403-North	76.1	59.8	942	0.4			
8/21/23	404-North	77.0	58.6	958	0.2			
8/21/23	405-North	76.7	61.3	768	0.2			
8/21/23	406-North	76.1	61.7	978	0.2			
8/21/23	407-North	75.8	52.4	1372	0.2			
8/21/23	408-North	76.1	80.4	871	0.4			
8/21/23	409-North	75.8	52.3	694	0.2			
8/21/23	410-North	78.4	48.3	1147	0.1			
8/21/23	411-North	79.9	54.6	1152	0.2			
8/21/23	412-North	79.5	65.3	994	0.3			
8/21/23	413-North	79.6	56.4	1098	0.2			
8/21/23	414-North	78.3	50.7	1078	0.2			
8/21/23	4 th -North Hall	81.4	58.1	775	0.3			
8/21/23	301-North	77.4	56.5	723	0.3			
8/21/23	302-North	78.7	45.4	869	0.2			
8/21/23	303-North	78.4	60.4	947	0.2			
8/21/23	304-North	75.1	58.3	460	0.2			
8/21/23	305-North	75.7	63.0	1041	0.1			
8/21/23	306-North	76.2	61.0	885	0.1			
8/21/23	307-North	76.9	55.2	978	0.6			
8/21/23	308-North	77.7	49.0	1119	0.3			
8/21/23	309-North	76.5	43.4	1035	0.2			
8/21/23	310-North	76.4	54.9	617	0.2			

Т	TABLE 4.2-1 – SUMMARY OF COMFORT PARAMETER MEASUREMENTS						
		St. Mark					
		1 Towe Brunswicl					
		Temperature	Relative	Carbon	Carbon		
Date	Location	(°F)	Humidity (%)	Dioxide (ppm)	Monoxide (ppm)		
		North		Dioniue (ppm)	(itonioniue (ppm)		
8/21/23	311-North	76.9	59.4	884	0.1		
8/21/23	312-North	78.4	44.3	938	0.7		
8/21/23	313-North	79.1	53.5	952	0.4		
8/21/23	314-North	75.2	42.6	827	0.8		
8/21/23	3 rd -North Hall	77.9	59.1	575	0.2		
8/21/23	201-North	78.6	39.2	920	0.5		
8/21/23	202-North	79.5	42.8	682	0.1		
8/21/23	203-North	79.8	56.1	664	0.2		
8/21/23	204-North	78.6	54.9	1024	0.2		
8/21/23	205-North	77.5	62.0	579	0.3		
8/21/23	207-North	77.8	59.8	893	0.2		
8/21/23	208-North	77.9	67.3	878	0.2		
8/21/23	206-North	75.4	47.5	660	0.1		
8/21/23	209-North	71.9	65.2	643	0.2		
8/21/23	210-North	75.1	55.3	924	0.1		
8/21/23	211-North	76.5	57.8	894	0.1		
8/21/23	212-North	79.8	73.2	1682	0.1		
8/21/23	213-North	78.5	60.6	633	0.2		
8/21/23	214-North	77.8	60.1	899	0.2		
8/21/23	2 nd -North Hall	78.5	57.2	730	0.1		
8/21/23	101-North	76.5	57.4	744	0.2		
8/21/23	102-North	77.4	58.5	741	0.1		
8/21/23	103-North	80.1	46.7	914	0.2		
8/21/23	104-North	78.8	44.1	941	0.2		
8/21/23	105-North	78.1	50.1	1061	0.1		
8/21/23	107-North	75.7	49.5	1131	0.4		
8/21/23	108-North	76.0	33.3	994	0.1		
8/21/23	106-North	76.6	46.5	931	0.2		
8/21/23	109-North	75.0	65.1	530	0.4		
8/21/23	110-North	76.1	54.1	1028	0.5		
8/21/23	Laundry-North	76.4	46.2	564	0.1		
8/21/23	Marketing Office	73.6	42.1	491	0.1		
8/21/23	Accounting Office	72.6	45.4	538	0.0		
8/21/23	Director Office	72.2	44.5	551	0.0		
8/21/23	Admin Office	71.6	45.6	545	0.1		
8/21/23	N. Resident Lobby	72.1	51.3	535	0.1		
8/21/23	N. Main Lobby	73.4	54.6	538	0.0		
8/21/23	Wellness	74.1	58.5	519	0.1		
8/21/23	Rec Center	74.6	52.1	656	0.1		
8/21/23	Library	74.5	54.0	626	0.2		
	F	South			1		
8/22/23	Exterior	83.5	75.5	394	1.1		
8/22/23	601-South	78.6	53.0	1082	0.8		
8/22/23	602-South	79.3	44.6	1002	0.3		
8/22/23	603-South	79.7	57.2	961	0.3		

TA	TABLE 4.2-1 – SUMMARY OF COMFORT PARAMETER MEASUREMENTS						
		St. Mark'					
		1 Towe Brunswick					
		Temperature	Relative	Carbon	Carbon		
Date	Location	(°F)	Humidity (%)	Dioxide (ppm)	Monoxide (ppm)		
		South '		Dioniue (ppm)	inononiue (ppin)		
8/22/23	604-South	80.5	48.6	885	0.3		
8/22/23	605-South	77.8	40.5	889	1.0		
8/22/23	606-South	79.1	53.2	905	0.5		
8/22/23	607-South	81.4	49.0	737	0.5		
8/22/23	608-South	79.0	45.4	706	0.6		
8/22/23	609-South	78.3	57.1	883	0.3		
8/22/23	610-South	79.4	55.1	801	0.3		
8/22/23	611-South	76.2	38.3	747	0.2		
8/22/23	612-South	77.5	47.9	919	0.2		
8/22/23	501-South	78.3	62.1	556	0.7		
8/22/23	502-South	79.1	63.5	935	0.3		
8/22/23	503-South	75.7	42.8	989	0.5		
8/22/23	504-South	76.0	55.9	850	0.4		
8/22/23	505-South	77.5	65.1	815	0.2		
8/22/23	506-South	76.3	41.5	967	0.5		
8/22/23	507-South	77.7	60.2	967	0.3		
8/22/23	508-South	78.9	74.6	1234	0.2		
8/22/23	509-South	78.9	61.9	864	0.5		
8/22/23	510-South	77.3	47.7	809	0.5		
8/22/23	511-South	76.6	64.9	641	0.2		
8/22/23	512-South	74.6	47.5	901	0.2		
8/22/23	412-South	78.1	50.2	1511	0.3		
8/22/23	411-South	78.2	46.6	809	0.2		
8/22/23	410-South	77.9	54.2	1279	0.3		
8/22/23	409-South	78.3	67.0	961	0.3		
8/22/23	408-South	80.5	63.5	1177	0.2		
8/22/23	407-South	76.4	37.1	1040	0.5		
8/22/23	406-South	79.1	53.6	87.6	0.3		
8/22/23	405-South	78.2	50.1	1194	0.2		
8/22/23	404-South	78.1	46.3	967	0.3		
8/22/23	403-South	78.4	56.4	959	0.2		
8/22/23	402-South	78.6	68.7	1046	0.8		
8/22/23	401-South	78.4	60.2	736	0.3		
8/22/23	4 th -South Hall	79.1	59.6	814	0.2		
8/22/23	301-South	79.4	73.6	510	0.2		
8/22/23	302-South	78.3	64.5	741	0.3		
8/22/23	303-South	78.2	57.6	1269	0.5		
8/22/23	304-South	77.2	60.2	844	0.2		
8/22/23	305-South	76.9	62.4	739	0.3		
8/22/23	306-South	77.0	72.9	931	0.2		
8/22/23	307-South	78.0	59.2	1428	0.0		
8/22/23	308-South	78.2	45.4	745	0.5		
8/22/23	309-South	79.1	75.0	1415	0.2		
8/22/23	310-South	79.2	58.2	937	0.2		

T.	TABLE 4.2-1 – SUMMARY OF COMFORT PARAMETER MEASUREMENTS St. Mark's Towers							
1 Tower Plaza								
Brunswick, Georgia								
Data Lagation Temperature Relative Carbon Carb								
Date	Location	(°F)	Humidity (%)	Dioxide (ppm)	Monoxide (ppm)			
		South '	• • •	,	· · · · · ·			
8/22/23	311-South	79.3	60.4	1002	0.8			
8/22/23	312-South	78.9	56.6	875	0.3			
8/22/23	3 rd -South Hall	80.0	59.5	702	0.5			
8/22/23	201-South	76.7	65.4	685	0.2			
8/22/23	202-South	78.5	65.3	883	0.2			
8/22/23	203-South	75.2	49.5	710	0.6			
8/22/23	204-South	73.2	58.3	665	0.2			
8/22/23	205-South	76.5	60.6	910	0.2			
8/22/23	206-South	75.1	61.3	783	0.1			
8/22/23	207-South	77.4	57.8	827	0.2			
8/22/23	208-South	78.4	65.6	1056	0.2			
8/22/23	209-South	77.7	39.8	1037	0.6			
8/22/23	210-South	78.1	61.0	765	0.2			
8/22/23	211-South	78.4	51.1	720	0.1			
8/22/23	212-South	80.8	72.3	676	0.1			
8/22/23	2 nd -South Hall	76.4	58.4	594	0.2			
8/22/23	101-South	78.1	67.6	928	0.2			
8/22/23	102-South	77.0	63.8	696	0.2			
8/22/23	103-South	76.4	59.6	824	0.2			
8/22/23	104-South	78.0	69.5	892	0.1			
8/22/23	105-South	75.8	62.9	784	0.5			
8/22/23	106-South	76.5	71.2	851	0.1			
8/22/23	107-South	75.3	77.7	893	0.2			
8/22/23	108-South	77.2	69.4	923	0.1			
8/22/23	109-South	77.3	52.4	994	0.5			
8/22/23	110-South	76.1	51.9	742	0.2			
8/22/23	Laundry-South	75.8	52.8	671	0.2			
8/22/23	Shop-South	75.9	57.4	850	0.2			
8/22/23	Lobby-South	75.7	52.6	695	0.5			
8/22/23	Utility Room-South	72.9	46.2	657	0.4			
Bold measu	rements indicate levels	outside the recom	mended parameter	rs.				

Interior temperature measurements ranged from 78.1-81.4°F, which are **above** the OSHA recommended range of 68-78°F, in the following areas: 6th Floor North (604, Hall), 5th Floor North (514-513, 511-510, Hall), 4th Floor North (410-414, Hall), 3rd Floor North (302-303, 312-313), 2nd Floor North (201-204, 212-213, Hall), 1st Floor North (103-105), 6th Floor South (601-604, 606-610), 5th Floor South (501-502, 508-509), 4th Floor South (412-411, 409-408, 406-401, Hall), 3rd Floor South (301-303, 308-312, Hall), 2nd Floor South (202, 208, 210-212), 1st Floor South (101).

Interior temperature measurements ranged from 71.6°F -78.0°F, which are **within** the OSHA recommended range of 68-78°F, in the following areas: 6th Floor North (601-602, 605-614), 5th Floor North (512, 509-501), 4th Floor North (401-409), 3rd Floor North

(301, 304-311, 314, Hall), 2nd Floor North (205-211, 214), 1st Floor North (101-102, 107-110, Laundry, Marketing-Accounting-Director-Admin Offices, Resident Lobby, Main Lobby, Wellness, Rec Center, Library), 6th Floor South (605, 611-612) 5th Floor South (503-507, 510-512), 4th Floor South (410, 407), 3rd Floor South (304-307), 2nd Floor South (201, 203-207, 209, Hall), 1st Floor South (102-110, Laundry, Shop, Lobby, Utility Room). It should be noted that the recommended range is based on occupant thermal comfort.

Relative humidity measurements ranged from 60.1-80.4%, which is **above** the OSHA recommended range of 30%-60% in the following areas: 6th Floor North (603-604, 606, 608, 613-614), 5th Floor North (513, 511, 510-509, 506-504), 4th Floor North (402, 405-406, 408, 412), 3rd Floor North (303, 305-306), 2nd Floor North (205, 208-209, 212-214), 1st Floor North (109), 5th Floor South (501-502, 505, 507-509, 511), 4th Floor South (409-408, 402-401), 3rd Floor South (301-302, 304-306, 309, 311), 2nd Floor South (201-202, 205-206, 208, 210, 212), 1st Floor South (101-102, 104-108).

Relative humidity measurements ranged from 38.3-59.8%, which is **within** the OSHA recommended range of 30%-60%, in the following areas: 6th Floor North (601-602, 605, 607, 609-612, Hall), 5th Floor North (514, 512, 508-507, 503-501, Hall), 4th Floor North (401, 403-404, 407, 409-411, 413-414, Hall), 3rd Floor North (301-302, 304, 307-314, Hall), 2nd Floor North (201-204, 206-207, 210-211, Hall), 1st Floor North (101-108, 110, Laundry, Marketing-Accounting-Director-Admin Offices, Resident Lobby, Main Lobby, Wellness, Rec Center, Library), 6th Floor South (601-612), 5th Floor South (503-504, 506, 510, 512), 4th Floor South (412-410, 407-403, Hall), 3rd Floor South (303, 307-308, 310, 312, Hall), 2nd Floor South (203-204, 207, 209, 211, Hall), 1st Floor South (103, 109-110, Laundry, Shop, Lobby, Utility). It should be noted that the recommended range is based on occupant thermal comfort and control of microbial growth on building surfaces.

Interior carbon dioxide measurements were found to be **above** the maximum ASHRAE level of 700 ppm above outside readings and **below** the OSHA PEL of 5,000 ppm in the following areas: 6th Floor North (609-611), 5th Floor North (513-511, 506, 501), 4th Floor North (402, 407, 410-411, 413-414), 3rd floor North (308), 2nd Floor North (212), 1st Floor North (107), 5th Floor South (508), 4th Floor South (412, 410, 408, 405), 3rd Floor South (303, 307, 309).

Interior carbon dioxide measurements were found to be **within** the maximum ASHRAE level of 700 ppm above outside readings and **below** the OSHA PEL of 5,000 ppm in the following areas: 6th Floor North (601-610, 612-614, Hall), 5th Floor North (502-505, 507-510, 514, Hall), 4th Floor North (401, 403-406, 408-409, 412, Hall), 3rd Floor North (301-307, 309-314, Hall), 2nd Floor North (201-211, 213-214, Hall), 1st Floor North (101-106, 108-110, Laundry, Marketing-Accounting-Director-Admin Offices, Resident Lobby, Main Lobby, Wellness, Rec Center, Library), 6th Floor South (601-612), 5th Floor South (501-507, 509-512), 4th Floor South (401-404, 406-407, 409, 411, Hall), 3rd Floor South (301-302, 304-306, 308, 310-312, Hall), 2nd Floor South (201-212, Hall), 1st Floor South (101-110, Laundry, Shop, Lobby, Utility).

Interior carbon monoxide measurements were found to be **below** the maximum NAQQS level of 35ppm and **below** the OSHA PEL of 50 ppm in all areas tested.

4.3 **Particulate Surface Sampling**

Sixteen particulate surface samples were collected from within the complaint area to evaluate the possibility of mold growth. A copy of the laboratory analytical report is included in **Appendix A**.

Analytical results which indicated "rare" or "low" counts of fungal spores and hyphae are not indicative of fungal growth associated with the sampled surface.

Analytical results which indicated "medium" or "high" counts of fungal spores and hyphae are indicative of fungal growth associated with the sampled surface.

A summary of the analytical laboratory report for the bio-aerosol sampling follows in **Table 4.3-1 – Summary of Particulate Surface Sampling.**

ТА	TABLE 4.3-1 – SUMMARY OF PARTICULATE SURFACE SAMPLING St. Mark's Towers 1 Tower Plaza Brunswick, Georgia						
Sample #	Sample Location	Building Material	Results				
T-1	603-North Living Room	Wood Window Ledge	"High" Cladosporium "Medium" Insect Fragment "Rare" Ascospores, Aspergillus/Penicillium, Pollen				
T-2	605-North Living Room	Wood Window Ledge	"High" Cladosporium "Rare" Alternaria, Curvularia, Ganoderma, Pollen				
Т-3	608-North Living Room	Cove Base	"High" Alternaria (Ulocladium), Chaetomium "Medium" Aspergillus/Penicillium "Rare" Pollen				
T-4	512-North Living Room	Drywall	"High" Cladosporium "Rare" Pollen				
T-5	510-North Living Room	Drywall	"High" Cladosporium				
Т-6	507-North Living Room	Wood Window Ledge	"High" Cladosporium				
T-7	501-North Living Room	Wood Window Ledge	"High" Cladosporium				
T-8	407-North Bedroom	Wood Window Ledge	"High" Cladosporium				
Т-9	214-North Living Room	Drywall	"High" Cladosporium				
T-10	102-North Living Room	Drywall	"High" Cladosporium "Rare" Pollen				
T-11	109-North Living Room	Drywall	"High" Cladosporium "Rare" Insect Fragment				
T-12	509-South Living Room	Drywall	"High" Cladosporium "Medium" Aspergillus/Penicillium				

TABLE 4.3-1 – SUMMARY OF PARTICULATE SURFACE SAMPLING St. Mark's Towers 1 Tower Plaza Brunswick, Georgia							
Sample # Sample Location Building Material Results							
T-13	409-South Bedroom	Drywall	"High" Aspergillus "Rare" Insect Fragment, Pollen				
T-14	202-South Living Room	Drywall	"High" Cladosporium "Rare" Pollen				
T-15	209-South Living Room	Drywall	"High" Cladosporium				
T-16	Shop-South	Drywall	"High" Stachybotrys/Memnoniella "Low" Cladosporium "Rare" Basidiospores, Pollen				
Results designate	Results designated in bold type indicate fungal growth on the sampled surface.						

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the assessment, GLE provides the following conclusions:

- 1. Visible water and mold-impacted materials were observed in the assessed areas as outlined in **Table 4.1-1**.
- 2. Direct read temperature, relative humidity, and carbon dioxide measurements were **above** recommended guidelines as identified in Section 4.2 above
- 3. Direct read carbon monoxide measurements were within the the recommended guidelines.
- 4. The results of the particulate surface sampling **are** indicative of fungal growth associated with the sampled surfaces.

Based on the findings of the assessment, GLE recommends the following:

- 1. All water/mold damaged building materials identified in **Table 4.1-1** should be properly remediated in accordance with the remediation recommendations presented in **Appendix B Remediation Recommendations**.
- 2. All <u>non-porous</u> building materials (such as wood, metal, glass, tile, painted plaster, plastic, etc.) exhibiting surficial mold growth and/or particulate accumulation should be properly cleaned by a qualified mold remediation contractor utilizing damp-wiping and HEPA-vacuuming techniques. During remediation/cleaning activities, HEPA-filtered negative air machines should be operated in the re-circulation mode (scrubbing) to continuously filter the air within the identified portions of the site. The air scrubbing equipment should be relocated periodically to enhance the entrainment and subsequent

filtration of airborne fungal spores within the identified portions of the site. Additionally, all horizontal surfaces within the identified portions of the site should be HEPA vacuumed and damp (not wet) wiped.

All <u>porous</u> building materials (such as upholstered furniture, linens, window treatments, carpet, etc.) exhibiting surficial mold growth should properly cleaned or laundered. Materials exhibiting mold growth following cleaning should be discarded.

- 3. HEPA-filtered negative air machines should be operated in the re-circulation mode (scrubbing) to continuously filter the air within the identified portions of the site. The air scrubbing equipment should be relocated periodically to enhance the entrainment and subsequent filtration of airborne fungal spores within the identified portions of the site. Additionally, all horizontal surfaces within the identified portions of the site should be HEPA vacuumed and damp (not wet) wiped.
- 4. Qualified mechanical personnel, or a qualified contractor, should evaluate, clean, and make any necessary repairs to the packaged thermal air conditioner (PTAC) systems associated with the subject building to assure that the PTAC system components are operating within the manufacturer's specifications, and are properly sized for the subject spaces.

Specifically, the following should be addressed:

- a) Elevated interior temperature
- b) Elevated interior humidity
- c) Elevated carbon dioxide levels

The PTAC systems should be properly cleaned periodically and operated in a manner to maintain temperature and relative humidity within the recommended ranges. PTAC units found to be unrepairable, or unable to maintain the temperature and relative humidity within the recommended ranges, should be considered for replacement.

- 5. Properly evaluate and repair any deficiencies observed, associated with the building envelope, specifically the perimeter walls of each housing unit to prevent water intrusion.
- 6. Exterior siding, penetrations, and conduits should be repaired and/or sealed to prevent water intrusion.
- 7. Properly evaluate the integrity of the window seals/gaskets and conduct repairs, replacement, or caulking, if necessary, to prevent water infiltration.

8. GLE further recommends that post mold remediation confirmation testing (PMRCT) be performed to assess the effectiveness of mold remediation activities. Indoor and outdoor baseline air samples should be collected and analyzed to determine the presence of interior mold spore concentrations in the affected areas of the structure.

6.0 LIMITATIONS

GLE performed the scope of services as presented in our proposal. Reasonable effort has been made by GLE personnel to assess representative locations within the facility. Destructive sampling was not utilized as part of this assessment. GLE assumes no liability for existing conditions or damage within the subject facility or for any consequential effects that may result from our services and collection of field samples and measurements.

Mold growth may occur in various areas of a structure where water/moisture leak(s) are not addressed. These areas include cavities/enclosures and adjacent building materials that house plumbing/drainage-lines and can be affected by moisture intrusion from the exterior the building. This investigation did not include areas not known to have been affected by water damage moisture damage or inaccessible areas; therefore, the potential for mold growth in these areas cannot be dismissed at this time.

The information contained in this report was prepared based upon specific parameters requested by the client. If additional information is available or becomes available, it should be forwarded for our review to determine if changes to our conclusions and recommendations are necessary. The data and evaluation in the report reflects conditions identified at the time of our site visit, and should not be construed as being representative of the site at a later date. GLE assumes no liability for any perceived or documented health effects of tenants, visitors, contractors, or any other individual that has or may come in contact with the building that may be attributable to the microbial conditions present within the building.

The information herein is only for the specific use of the client and GLE. GLE accepts no responsibility for the use, interpretation, or reliance by other parties on the information contained herein, unless written authorization has been obtained from GLE. This report is not intended to be used as a document to render health related opinions.

APPENDIX A Laboratory Analytical Report and Chain of Custody



Atter

EMSL Analytical, Inc.

Project: 23000-27090 - St. Marks Towers FL

3303 PARKWAY CENTER COURT Orlando, FL 32808 Tel/Fax: (407) 599-5887 / (407) 599-9063 <u>http://www.EMSL.com</u> / <u>orlandolab@emsl.com</u> EMSL Order: 342319157 Customer ID: GLEA51L Customer PO: Project ID:

ntion:	Ryan Hendry
	GLE Associates
	8651 Baypine Road, Suite 115
	Jacksonville, FL 32256

Phone:	(904) 296-1880
Fax:	(904) 296-1860
Collected Date:	08/21/2023
Received Date:	08/24/2023
Analyzed Date:	08/27/2023

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Tape Samples (EMSL Method MICRO-SOP-200)

Particulates from Tape Samples (EMSL Method MICRO-SOP-200)							
Lab Sample Number: Client Sample ID: Sample Location:	342319157-0001 T-1 North 603 L.R. Wood Window Ledge	342319157-0002 T-2 North 605 L.R. Wood Window Ledge	342319157-0003 T-3 North 608 Living Room Cove Base	342319157-0004 T-4 North 512 Living Room Drywall	342319157-0005 T-5 North 510 Living Room Drywall		
Spore Types	Category	Category	Category	Category	Category		
Alternaria (Ulocladium)	-	Rare	*High*	-	-		
Ascospores	Rare	-	-	-	-		
Aspergillus/Penicillium	Rare	-	Medium	-	-		
Basidiospores	-	-	-	-	-		
Bipolaris++	-	-	-	-	-		
Chaetomium++	-	-	*High*	-	-		
Cladosporium	*High*	*High*	-	*High*	*High*		
Curvularia	-	Rare	-	-	-		
Epicoccum	-	-	-	-	-		
Fusarium++	-	-	-	-	-		
Ganoderma	-	Rare	-	-	-		
Myxomycetes++	-	-	-	-	-		
Pithomyces++	-	-	-	-	-		
Rust	-	-	-	-	-		
Scopulariopsis/Microascus	-	-	-	-	-		
Stachybotrys/Memnoniella	-	-	-	-	-		
Unidentifiable Spores	-	-	-	-	-		
Zygomycetes	-	-	-	-	-		
Aspergillus	-	-	-	-	-		
Hyphal Fragment	-	-	-	-	-		
Insect Fragment	Medium	-	-	-	-		
Pollen	Rare	Rare	Rare	Rare	-		
Fibrous Particulate	-	-	-	-	-		

Category: Count/per area analyzed - Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000

Denotes Not Detected.

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category. * = Sample contains fruiting structures and/or hyphae associated with the spores.

Yessica Martinez Seeman, Florida Microbiology Regional Manager or other Approved Signatory

No discernable field blank was submitted with this group of samples.

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL AIHA LAP, LLC-EMLAP Accredited #163563

Initial report from: 08/28/2023 07:55 AM



EMSL Analytical, Inc.

3303 PARKWAY CENTER COURT Orlando, FL 32808 Tel/Fax: (407) 599-5887 / (407) 599-9063 <u>http://www.EMSL.com</u> / <u>orlandolab@emsl.com</u> EMSL Order: 342319157 Customer ID: GLEA51L Customer PO: Project ID:

Attention: Ryan Hendry GLE Associates 8651 Baypine Road, Suite 115 Jacksonville, FL 32256

Phone:	(904) 296-1880
Fax:	(904) 296-1860
Collected Date:	08/21/2023
Received Date:	08/24/2023
Analyzed Date:	08/27/2023

Project: 23000-27090 - St. Marks Towers FL

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Tape Samples (EMSL Method MICRO-SOP-200)

Particulates from Tape Samples (EMSL Method MICRO-SOP-200)							
Lab Sample Number: Client Sample ID: Sample Location:	342319157-0006 T-6 North 507 L.R. Wood Window Ledge	342319157-0007 T-7 North 501 L.R. Wood Window Ledge	342319157-0008 T-8 North 407 Bed Wood Window Ledge	342319157-0009 T-9 North 214 Living Room Drywall	342319157-0010 T-10 North 102 Living Room Drywall		
Spore Types	Category	Category	Category	Category	Category		
Alternaria (Ulocladium)	-	-	-	-	-		
Ascospores	-	-	-	-	-		
Aspergillus/Penicillium	-	-	-	-	-		
Basidiospores	-	-	-	-	-		
Bipolaris++	-	-	-	-	-		
Chaetomium++	-	-	-	-	-		
Cladosporium	*High*	*High*	*High*	*High*	High		
Curvularia	-	-	-	-	-		
Epicoccum	-	-	-	-	-		
Fusarium++	-	-	-	-	-		
Ganoderma	-	-	-	-	-		
Myxomycetes++	-	-	-	-	-		
Pithomyces++	-	-	-	-	-		
Rust	-	-	-	-	-		
Scopulariopsis/Microascus	-	-	-	-	-		
Stachybotrys/Memnoniella	-	-	-	-	-		
Unidentifiable Spores	-	-	-	-	-		
Zygomycetes	-	-	-	-	-		
Aspergillus	-	-	-	-	-		
Hyphal Fragment	-	-	-	-	-		
Insect Fragment	-	-	-	-	-		
Pollen	-	-	-	-	Rare		
Fibrous Particulate	-	-	-	-	-		

Category: Count/per area analyzed - Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000

Denotes Not Detected.

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category. * = Sample contains fruiting structures and/or hyphae associated with the spores.

- oumple contains induing structures and/or hypride associated with the spores.

Yessica Martinez Seeman, Florida Microbiology Regional Manager or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL AIHA LAP, LLC-EMLAP Accredited #163563

Initial report from: 08/28/2023 07:55 AM



EMSL Analytical, Inc.

Project: 23000-27090 - St. Marks Towers FL

3303 PARKWAY CENTER COURT Orlando, FL 32808 Tel/Fax: (407) 599-5887 / (407) 599-9063 <u>http://www.EMSL.com</u> / <u>orlandolab@emsl.com</u> EMSL Order: 342319157 Customer ID: GLEA51L Customer PO: Project ID:

Attention: Ryan Hendry GLE Associates 8651 Baypine Road, Suite 115 Jacksonville, FL 32256 Col

Phone:	(904) 296-1880
Fax:	(904) 296-1860
Collected Date:	08/21/2023
Received Date:	08/24/2023
Analyzed Date:	08/27/2023

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other

Particulates from Tape Samples (EMSL Method MICRO-SOP-200)							
Lab Sample Number: Client Sample ID: Sample Location:	342319157-0011 T-11 North 109 Living Room Drywall	342319157-0012 T-12 South 509 Living Room Drywall	342319157-0013 T-13 South 409 Bedroom Drywall	342319157-0014 T-14 South 202 Living Room Drywall	342319157-0015 T-15 South 209 Living Room Drywall		
Spore Types	Category	Category	Category	Category	Category		
Alternaria (Ulocladium)	-	-	-	-	-		
Ascospores	-	-	-	-	-		
Aspergillus/Penicillium	-	Medium	-	-	-		
Basidiospores	-	-	-	-	-		
Bipolaris++	-	-	-	-	-		
Chaetomium++	-	-	-	-	-		
Cladosporium	*High*	*High*	-	*High*	*High*		
Curvularia	-	-	-	-	-		
Epicoccum	-	-	-	-	-		
Fusarium++	-	-	-	-	-		
Ganoderma	-	-	-	-	-		
Myxomycetes++	-	-	-	-	-		
Pithomyces++	-	-	-	-	-		
Rust	-	-	-	-	-		
Scopulariopsis/Microascus	-	-	-	-	-		
Stachybotrys/Memnoniella	-	-	-	-	-		
Unidentifiable Spores	-	-	-	-	-		
Zygomycetes	-	-	-	-	-		
Aspergillus	-	-	*High*	-	-		
Hyphal Fragment	-	-	-	-	-		
Insect Fragment	Rare	-	Rare	-	-		
Pollen	-	-	Rare	Rare	-		
Fibrous Particulate	-	-	-	-	-		

Category: Count/per area analyzed - Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000

Denotes Not Detected.

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category. * = Sample contains fruiting structures and/or hyphae associated with the spores.

Thomas

Yessica Martinez Seeman, Florida Microbiology Regional Manager or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL AIHA LAP, LLC-EMLAP Accredited #163563

Initial report from: 08/28/2023 07:55 AM



EMSL Analytical, Inc.

3303 PARKWAY CENTER COURT Orlando, FL 32808 Tel/Fax: (407) 599-5887 / (407) 599-9063

EMSL Order: 342319157 Customer ID: GLEA51L **Customer PO: Project ID:**

http://www.EMSL.com / orlandolab@emsl.com

Attention: Ryan Hendry **GLE** Associates 8651 Baypine Road, Suite 115 Jacksonville, FL 32256

Phone:	(904) 296-1880
Fax:	(904) 296-1860
Collected Date:	08/21/2023
Received Date:	08/24/2023
Analyzed Date:	08/27/2023

Project: 23000-27090 - St. Marks Towers FL

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Tane Samples (EMSL Method MICRO-SOP-200)

	Particulates from	Tape Samples (EMS		SOF-200)	
Lab Sample Number: Client Sample ID:	342319157-0016 T-16				
Sample Location:	South Shop Drywall				
Spore Types	Category	-	-	-	-
Alternaria (Ulocladium)	-				
Ascospores	-				
Aspergillus/Penicillium	-				
Basidiospores	Rare				
Bipolaris++	-				
Chaetomium++	-				
Cladosporium	Low				
Curvularia	-				
Epicoccum	-				
Fusarium++	-				
Ganoderma	-				
Myxomycetes++	-				
Pithomyces++	-				
Rust	-				
Scopulariopsis/Microascus	-				
Stachybotrys/Memnoniella	*High*				
Unidentifiable Spores	-				
Zygomycetes	-				
Aspergillus	-				
Hyphal Fragment	-				
Insect Fragment	-				
Pollen	Rare				
Fibrous Particulate	-				

Category: Count/per area analyzed - Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000

Denotes Not Detected.

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category. = Sample contains fruiting structures and/or hyphae associated with the spores.

Yessica Martinez Seeman, Florida Microbiology Regional Manager or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Orlando, FL AIHA LAP, LLC-EMLAP Accredited #163563

Initial report from: 08/28/2023 07:55 AM



EMSL ANALYTICAL, INC.

Microbiology Chain of Custody EMSL Order Number (Lab Use Only):

EMSL Analytical, Inc. 3303 Parkway Center Court

#342319157

Orlando, FL 32808							
PHONE: (407) FAX. (407)	599-5887						
FAX. (407)	599-9063						

Company : GLE Associates, Inc.					EMSL-Bill to: Different Same If Bill to is Different note instructions in Comments**			
Street: 8651 Baypine Road, Suite 115					Third Party Billing requires written authorization from third party			
City: Jacksonville State/Province: FL				Zij	Zip/Postal Code: 32256 Country: US			
Report To (Name):	Ryan Hendry	<u>.</u>		Te	lephone #: ⁹	04-296-1880		
Email Address: rhe	endry@gleassociates.co	m		Fa	<u>x #: 904-296</u>	6-1860 Put	rchase Order:	
Project Name/Numbe	er: 23000-27090 / St. N	larks Towers		Ple	ease Provide	Results: FAX	K 🖌 E-mail 🔤 Mail	
U.S. State Samples 1	aken: FL			Co	nnecticut Sa	amples: 🗌 Comm	ercial 🔲 Residential	
		around Time (
3 Hour	6 Hour 24 Hour] 72 Ho			Neek 2 Week	
Analysis completed in a							a to methodology requirements	
• M001 Air-O-Cell	Mon Cultu Mon Cultu Mon Cultu	rable Air San				Iergenco-D	M172 Versa Trap	
M049 BioSIS	M003 Burkard	• M043		.0	• M002 C			
• M030 Micro 5	 M174 MoldSnap 	• M176	Relle Sm	lart	• M130 Vi	a-Cell		
		Other Mic					·	
 M041 Fungal Direc M005 Viable Fungi 			Endotoxír		sis ate Count	 M029 Enter M019 Fec 	erococci al Coliform	
	ID and Count (Speciation)				R-ERMI 36		SA Analysis	
M007 Culturable Fi	ungi	 Panel 				 M028 Cry/ 	ptococcus neoformans	
M008 Culturable Fit			fotal Coli		-41	Detection		
 M009 Gram Stain (M010 Bacterial Cot 	unt and ID – 3 Most	· · · · · · · · · · · · · · · · · · ·	(Membrane Filtration) • M120 Histoplasma capsulatum M020 Fecal Streptococcus Detection					
Prominent		(Membra	embrane Filtration) • M033-39 Allergen Testing				
M011 Bacterial Cou Prominent	unt and ID – 5 Most		-		etection ter Screen		up Allergen I, Cockroach, Dustmites)	
	tamination in Buildings		Aycotoxir				Analytical Price Guide	
Preservation Method			<u> </u>	£		· - • •		
							2/20	
Name of Sampler:	Ryan Hendry and I	Damien Ba	ailey	Signati	ure of Sampl			
			Sam		Test	<u>_</u>		
Sample #	Sample Locat	ion	Ту		Code	Volume/Area	Date/Time Collected	
Example: A1	Kitchen L.R.		Air		M001	75L	1/1/12 4:00 PM	
	North 603 West 4		Tap	e	M.0411	1/12	8/21/23	
1-2	North 605 L.A. Was		└	,	<u> </u>	i	-	
<u>T-3</u>	North 608 Living Awn	Cove Buse	├ \-	_				
7-4		1 Drywall	╏				-	
1-5	North SID LIVING MOON	n Drywdl						
7-6	North SO7 L.B. Wood W	inday Ledye						
1-7	North 501 L.B. Word 1	Vintur Ledge						
1-8	North 407 Bed Wood 4	Indu Ledge		/				
Trg	North 214 Living Room	DIYWall	<u> </u>	/ 				
Client Sample # (s):	17-1-27	-16		Tot	tal # of Samp	oles:	16	
Relinquished (Client)			Date	: 8,	123/23	Time: /)	7:00	
Received (Client):	-	- /	Date	: 6	2/25/12	3 Time: 9	1:460	
Comments:		1	<u> </u>			<u>+</u>		
Copy results to: Jim Elliott (JElli	iott@gleassociates.com)	,						

Page 1 of C pages

Microbiology Chain of Custody

EMSL Order Number (Lab Use Only):

EMSL Analytical, Inc. 3303 Parkway Center Court

Orlando, FL 32808 PHONE: (407) 599-5887 FAX: (407) 599-9063

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EMSL ANALYTIGAL, INC.

<u>#342319157</u>

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected	
T-10	North 102 Living Room Drywall	Tape	M041	Imr	8/21/23	
T-11	North 109 Liwing Room Drywoll			I	\checkmark	
7-12	South 509 Ling Acom Drywoll				8/22/23	
T-13	Suth 409 Bedrum Drywall					
<u>T-14</u>	Suth 202 LWng Rwn Drywall					
T-15	South 209 Living how Drywoll					
7-16	South 209 Living Prom Drywall South Ship Drywall	\checkmark		\checkmark	<u> </u>	
				,	, , , , , , , , , , , , , , , , , , ,	
			ļ			
**Comments/Special Instructions: Copy results to, Jim Elliott (JElliott@gleassociates com)						

Page <u>7</u> of <u>7</u> pages

APPENDIX B Remediation Recommendations

Remediation Recommendations

- 1. Assure source of moisture intrusions, including but not limited to the suspect moisture intrusion issues outlined in this report, have been terminated and corrected.
- 2. In work areas where no visible microbial growth was identified, a controlled pressure enclosure area is not required. However, GLE recommends that these areas be isolated utilizing typical construction methods for dust suppression during the destructive removal of the moisture impacted materials.
 - If mold growth is identified at any time during the cleaning and/or removal of the moisture impacted building materials, then the area must be handled as containing mold growth and all control mechanisms recommended for moldaffected building materials should be immediately implemented.
 - If mold growth is not identified during the removal of the moisture impacted building materials, then the mitigation of these areas should continue under normal construction procedures.
- 3. Building materials identified as **water stained only** should be appropriately cleaned and dried (below 20% MC/WME). Following appropriate cleaning and verification of acceptable moisture content, the surface area may be primed and/or painted. If appropriate cleaning cannot be achieved, the materials may need to be removed and replaced.
- 4. Properly remove and dispose of all mold and water damaged porous building materials identified in **Table 4.1-1**.
- 5. Non-porous diffusers and return grilles, appliances, furniture, boxes and other miscellaneous items in remediation work areas should be thoroughly cleaned/scrubbed using wet-wipe cleaning utilizing a two-towel system with a microbial biocide agent and vacuums utilizing HEPA filters.
- 6. Porous furniture and/or other miscellaneous items in remediation work areas should be evaluated on an individual basis. In most cases, these items can be thoroughly cleaned/scrubbed using wet methods utilizing a microbial biocide agent, and vacuumed utilizing a vacuum system with HEPA filters.
- 7. Exposed wall, floor and/or ceiling components should be thoroughly cleaned/scrubbed using wet methods utilizing a microbial biocide agent, and vacuumed utilizing a vacuum system with HEPA filters.
- 8. Any wood components of the exposed walls and ceilings should be sealed with an appropriate sealant after following the cleaning protocol and allowing sufficient drying

time (components should have a moisture level of less than 12%). The sealant should not contain Linseed Oil.

- 9. Additional mold affected materials may be discovered during remediation activities conducted at the site, and should be addressed upon discovery.
- 10. All mold remediation activities should be conducted in a controlled pressure enclosure utilizing HEPA filtration. The intent is to isolate the remediation work area(s) to prevent dispersion of mold spores to unaffected areas of the structure. Activating any HVAC systems during any remediation activities should be avoided.
- 11. If air sampling indicates that bio-amplification of microbial spores is occurring, then HEPA-filtered negative air machines should be operated in the re-circulation mode (scrubbing) to continuously filter the air within the identified portions of the structure. The air scrubbing equipment should be relocated periodically to enhance the entrainment and subsequent filtration of airborne fungal spores within the identified portions of the structure. Additionally, all horizontal surfaces within the identified portions of the structure should be HEPA vacuumed and damp (not wet) wiped.
- 12. GLE recommends that post mold remediation confirmation testing (PMRCT) be performed to assess the effectiveness of the mold remediation activities. The sampling should be done prior to the initiation of the installation of replacement building components/finishes. The following PMRCT activities should be performed:
 - Visual Evaluation GLE will assess the work area for the presence of visible microbial growth, water damage, water staining, standing water and significant particulate accumulation. GLE will verify that recommended material removal was conducted and moisture levels in the affected areas are within an acceptable range (<20% MC/WME).
 - Air Sampling Indoor and outdoor baseline air samples should be collected and analyzed to determine the presence interior mold spore concentrations in the affected areas of the structure.
- 13. All work should be performed in strict accordance with all federal, state, and local regulations and ordinances using experienced and trained personnel.

APPENDIX C Personnel and Laboratory Certifications



american board of industrial hygiene[®]

organized to improve the practice of industrial hygiene proclaims that

Michael B. Collins

having met all requirements of education, experience and examination, and ongoing maintenance, is hereby certified in the

> **COMPREHENSIVE PRACTICE** of **INDUSTRIAL HYGIENE**

and has the right to use the designations

CERTIFIED INDUSTRIAL HYGIENIST

CIH

Certificate Number

8476 CP

Awarded:

July 3, 2003

Expiration Date:

December 1, 2023



. miller

Chief Executive Officer. ABIH



AIHA Laboratory Accreditation Programs, LLC acknowledges that EMSL Analytical, Inc. 3303 Parkway Center Ct Orlando, FL 32808-1040

Laboratory ID: LAP-163563

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA LAP), LLC accreditation to the ISO/IEC 17025:2017 international standard, General Requirements for the Competence of Testing and Calibration Laboratories in the following:

 $\overline{}$

LABORATORY ACCREDITATION PROGRAMS

1	INDUSTRIAL HYGIENE	Accreditation Expires: February 01, 2024
ſ	ENVIRONMENTAL LEAD	Accreditation Expires: February 01, 2024
1	ENVIRONMENTAL MICROBIOLOGY	Accreditation Expires: February 01, 2024
]	FOOD	Accreditation Expires:
]	UNIQUE SCOPES	Accreditation Expires:
]	BERYLLIUM FIELD/MOBILE	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached Scope of Accreditation. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2017 and AIHA LAP, LLC requirements. This certificate is not valid without the attached Scope of Accreditation. Please review the AIHA LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Cheryl J. Marton

Cheryl O Morton Managing Director, AIHA Laboratory Accreditation Programs, LLC

Date Issued: 01/31/2022

Revision19.1: 07/28/2021



AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

EMSL Analytical, Inc.

Laboratory ID: LAP-163563

Issue Date: 01/31/2022

3303 Parkway Center Ct Orlando, FL 32808-1040

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air and composited wipes analyses are not included as part of the NLLAP.

Environmental Lead Laboratory Accreditation Program (ELLAP)

Component, parameter or characteristic tested	Technology sub-type/Detector	Method	Method Description (for internal methods only)
Airborne Dust	AA	NIOSH 7082	N/A
	AA	EPA SW-846 3050B	N/A
Paint		EPA SW-846 3051A	N/A
		EPA SW-846 7000B	N/A
	АА	EPA SW-846 3050B	N/A
Settled Dust by Wipe		EPA SW-846 3051A	N/A
		EPA SW-846 7000B	N/A
	AA	EPA SW-846 3050B	N/A
Soil		EPA SW-846 3051A	N/A
		EPA SW-846 7000B	N/A

Initial Accreditation Date: 09/01/2007

A complete listing of currently accredited ELLAP laboratories is available on the AIHA LAP, LLC website at: <u>http://</u> www.aihaaccreditedlabs.org