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August 19, 2020

PRIII Verona Holdings, LLC.
c/o PGIM Real Estate

Attn: Jose Blanco
3348 Peachtree Road NE Suite 1100
Atlanta, GA 30326

Andy Syang
1540 Broadway
New York, NY 10035

RE: Report of Findings: Microbial Consulting Services and Moisture Assessment

Arium Verona View (Apt 169)
10900 NW 17th Street, Plantation, FL 33322

ATC Project No. NPPGIM2053

Dear Mr. Blanco and Mr. Syang:

This report of findings presents the observations, data, and opinions of the Microbial Consulting Services and Moisture Assessment conducted in Unit 169 at Arium Verona View located at 10900 NW 17th Street, Plantation, Florida. Based on our assessment, ATC Group Services LLC (ATC) did observe evidence of visible suspected microbial growth (VSMG) within the apartment assessed. No visible or active water intrusion was observed within the apartment assessed. This report includes ATC's procedures and methodologies, observations and measurements, and applicable conclusions and recommendations.

INTRODUCTION

ATC was retained by PRIII Verona Holdings, LLC to provide microbial consulting services and to conduct moisture assessment activities within Unit 169 at the above-mentioned facility. The purpose of ATC's activities was to identify VSMG and water-damaged building materials and evaluate the causal factors contributing to the damages. The assessment was limited to Unit 169 of the facility.

PURPOSE AND SCOPE OF SERVICES

ATC understands that potential mold conditions exist within apartment 169.

ATC provided the following services:

- Observed accessible affected areas within the apartment;
- Evaluated the reported microbial damage condition(s);
- Collected measurements and samples of the following constituents:
 - Moisture content of building materials via handheld moisture meters;
 - Direct read measurements of comfort parameters (i.e. temperature and relative humidity);
- Prepare a Report of Findings.

METHODOLOGIES

ATC employed a combination of investigative techniques for this assessment including:

Visual Observations

Initial assessment of the areas was performed in general accordance with ASTM E2418-06 *Standard Guide for Readily Observable Mold and Conditions Conducive to Mold in Commercial Buildings: Baseline Survey Process* and ASTM D7338 – 10 *Standard Guide for Assessment Of Fungal Growth in Buildings*.

Moisture Content of Building Materials

The relative moisture content (MC) of porous building materials potentially affected by moisture/water intrusion was measured using a *Protimeter Surveymaster™* hand held moisture meter. Moisture content is determined on a relative scale depending on the type of material being tested and environmental conditions. ATC determines if elevated moisture is present based on these factors, moisture measurements displayed on the meter, and the judgement of the inspector.

The moisture content in wood is calculated by the meter as a percentage of saturation, with moisture content measured to be less than fifteen percent to be "normal" MC, and less than the water availability required by fungi for growth. According to manufacturer specifications, new drywall panels exhibit an average moisture content of up to 15 percent. It is considered that 20 percent moisture content is capable of supporting colonization by some microbes.

Unlike measurement of the moisture content of wood products, moisture content criteria for materials such as drywall are based on an average of measurements of panels considered to be undamaged by water/moisture intrusion. According to manufacturer specifications, new drywall panels exhibit an average moisture content of up to 15 percent. It is considered that 20 percent moisture content is capable of supporting colonization by some microbes.

Moisture meter measurements using a *Protimeter Surveymaster™* may be interpreted and categorized as follows:

- Less than 16 percent for drywall (Green Zone of scale display) — the material is considered to be "dry" under normal indoor humidity condition.
- 16-20 percent for drywall (Yellow Zone) — the moisture content of the material is considered questionable as related to potential moisture damage and may permit microbial growth on the material.
- Greater than 20 percent for drywall (Red Zone) — the material is considered to exhibit an unacceptable moisture content that may contribute to physical degradation of the panel(s) and permit microbial growth. Mitigation and remediation of the damage is generally indicated.

Indoor Air Quality Parameters (Relative Humidity, Temperature)

Ambient air was tested for the following indoor air quality (IAQ) parameters during the assessment: relative humidity and temperature. Results from this type of sampling are typically used to document general ambient air conditions, including indications of outside air introduced into the ventilation system, potential contamination from outside the building, and evaluating the effectiveness of the ventilation system to provide comfortable conditions in the building.

Temperature

The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 55-2013 (*Thermal Environmental Conditions for Human Occupancy*) generally defines methods for determining acceptable indoor temperature ranges based on the level of human occupant activity (i.e., metabolic rate), occupant clothing insulation, ambient humidity, and other

factors. The intent of the standard is to provide acceptable thermal comfort for a desired percentage of building occupants. For typical office space as defined by the Standard, the following table presents temperature ranges intended to provide acceptable thermal comfort for approximately 80% of building occupants. Recommended indoor temperatures typically range between 73°F and 79°F.

Relative Humidity

The current ASHRAE Standard 55-2013 does not provide recommendations for maintaining indoor relative humidity within a specific range but it does establish an upper boundary for dew point at 62.2°F. This upper threshold dew point occurs at varying combinations of temperature and relative humidity (i.e. approximately 65% relative humidity at an ambient temperature of 72°F). An additional guideline regarding indoor air relative humidity exists in ASHRAE Standard 62.1-2013 (Ventilation for Acceptable Indoor Air Quality) that establishes a maximum relative humidity level of 65% where air-conditioning systems with dehumidification capability are installed. The American Industrial Hygiene Association (AIHA) recommends that relative humidity range between 30% to 60% for comfort. Additionally, according to the United States Environmental Protection Agency (EPA) *Mold Remediation in Schools and Commercial Buildings*, RH inside buildings should be maintained below 60% to reduce the potential for microbial growth.

OBSERVATIONS

ATC representative Alex Tovar conducted the limited moisture and microbial assessment on August 18, 2020. A visual assessment was conducted in Unit 169. Surficial VSMG was present on HVAC vent covers, drywall walls, and furniture. No active water intrusion was occurring at the time of the assessment. The VSMG was likely caused by the elevated humidity within the apartment. A photographic log and building layout is found in **Appendix A**. A copy of the assessor's mold license is found in **Appendix B**.

Table 1 provides a synopsis of ATC's observations:

TABLE 1: MOISTURE & MICROBIAL ROOM OBSERVATIONS						
Arium Verona View - Apt 169						
10900 NW 17th Street, Plantation, FL 33322						
Area	SVMG?	Water Damage?	Observations	Temperature (°F)	Relative Humidity (%)	
Unit 169	Yes	No	No water intrusion or elevated moisture issue present, VSMG seems to be related to elevated humidity in the apartment. VSMG noted on vent covers, drywall walls, and furniture throughout the apartment. The AHU had issues noted with ductwork tape and the condensate pan.	76 interior 70.4 exterior	66.9% interior, 87.3% exterior	

FINDINGS & CONCLUSIONS

- No musty odors were detected during the site visit.
- The relative humidity (RH) levels for the tested areas within the apartment were elevated at 67% when compared to the maximum ASHRAE standard of 65%. In addition, the dew point calculations were above the upper acceptable threshold levels of 62.2 °F.
- VSMG was observed on several walls throughout the apartment. See attached marked-up floor plan depicting these locations found in **Appendix A**.
- VSMG was observed on the supply diffuser and return air grille vents within the apartment.
- Loose ductwork tape was observed on the bottom region of the AHU. Air appears to leak from this area. See photograph number 22 in the photo log in **Appendix A**.

- A hole can be seen on the AC plenum on an area of breached ductwork tape on the ductwork. See photograph number 23 in the photo log in **Appendix A**.
- The condensate drain line appears to be improperly sloped away from the AHU drain pan. In addition, a section of the plastic condensate drain line appears to have dried out leaving a water stain mark inside the drain line. See photograph numbers 24 and 25 in the photo log in **Appendix A**.
- VSMG was observed on the sofa in the living room. See photograph number 28 in the photo log in **Appendix A**.
- VSMG was observed underneath two (2) tables in the living room. See photograph numbers 29 and 30 in the photo log in **Appendix A**.
- Indoor CO₂ levels ranged from a low of 1,410 ppm to a high of 1,433 ppm. The ASHRAE standard calls for CO₂ levels to be below 700 ppm over ambient outdoor air concentrations. Ambient outdoor air was measured at 445 ppm and 498 ppm, respectively, setting the ASHRAE standard between 1,145 ppm and 1,198 ppm. The CO₂ readings recorded within the unit exceeded the ASHRAE standard.
- ATC has previously collected representative samples of suspect asbestos-containing drywall and joint compound materials anticipated to be affected or impacted by mold abatement projects. Asbestos was not detected in the samples collected.

RECOMMENDATIONS

Based on the visual observations and equipment readings, ATC recommends the following for apartment 169:

1. Vertical and horizontal surfaces, particularly those with VSMG, within the apartment should be thoroughly cleaned using an odorless anti-microbial solution. This includes, but is not limited to the drywall walls and vent covers. Furniture with VSMG should be steam cleaned or replaced. This should be conducted by a State of Florida licensed mold remediation contractor.
2. The AHU should be thoroughly inspected and cleaned or replaced if not feasible. The hole on the ductwork should be sealed or repaired. The condensate drain line for the AHU should be sloped away from the AHU to discharge water properly from the condensate pan. This should be conducted by an HVAC service contractor or in-house maintenance staff.
3. Temperature should be maintained between 73°F and 79°F. Relative humidity should be maintained below 65%, or ideally 60%.
4. After cleaning and disinfection is completed, ATC will conduct a visual assessment to confirm recommended items were addressed and no VSMG remains in the apartment.

LIMITATIONS

This report has been prepared to assist PRIII Verona Holdings, LLC in evaluating potential mold and water damage conditions in Unit 169 at Arium Verona View located at 10900 NW 17th Street, Plantation, Florida. ATC provided these services consistent with the level and skill ordinarily exercised by members of the profession currently practicing under similar conditions. This statement is in lieu of other statements either expressed or implied. This report is intended for the sole use of PRIII Verona Holdings, LLC. This report is not intended to serve as a bidding document or as a project specification document and actual site conditions and quantities should be field verified.

The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document, the findings, conclusions, or recommendations is at the risk of said user. Although reasonable attempts have been made to identify suspect fungi (mold) in the areas identified, the inspection techniques used are inherently limited in the sense that only full demolition procedures will reveal all building materials of a structure and therefore all areas of potential fungal growth. The size of the area impacted by fungal impact is based on professional judgment and practicality. Other possible building material hazards such as lead-based paint were not included as part of this evaluation and may require proper sampling for identification prior to disturbance. Other unidentified microbiological impact may be located within walls, ceiling cavities, below flooring or grade, and other non-accessible areas. Precaution should be used during any remediation activities.

Additionally, the passage of time may result in a change in the environmental characteristics at this site. This report does not warrant against future operations or conditions that could affect the recommendations made. The results, findings, conclusions, and recommendations expressed in this report are based only on conditions that were observed during ATC's assessment of the site.

CLOSING

ATC appreciates the opportunity to be of service to PRIII Verona Holdings, LLC on this project and we look forward to working with you on future assignments. In the meantime, if you have questions or comments regarding the information in this report or if we can be of further assistance, please do not hesitate to contact the undersigned.

Sincerely,

ATC GROUP SERVICES LLC



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Appendices:
Appendix A Photographic Log and Building Layout
Appendix B Mold Assessor's License



Appendix A

Photographic Log and Building Layout



Photo 1: View of humidity and temperature readings



Photo 2: View of suspect VMG on vent in kitchen



Photo 3: View of suspect VMG on vent in living room and ceiling



Photo 4: Close-up view of suspect VMG on vent in living room

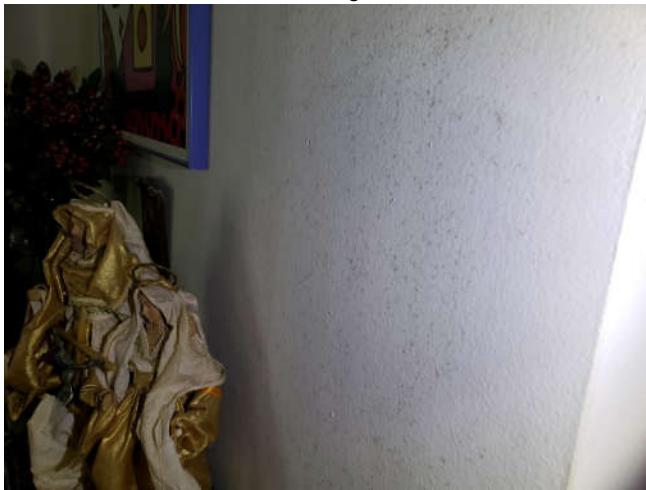


Photo 5: View of suspect VMG on east wall in living room



Photo 6: View of suspect VMG on west corner wall in living room



Photo 7: Close-up view of suspect VMG on west corner wall in living room



Photo 8: View of suspect VMG on ceiling in hallway



Photo 9: View of dirty air return grille in hallway



Photo 10: Close-up view of dirty air return grille in hallway



Photo 11: View of suspect VMG on west wall in hallway



Photo 12: View of suspect VMG on east wall in hallway



Photo 13: View of suspect VMG on upper west wall and ceiling in bathroom



Photo 14: Close-up view of suspect VMG on upper west wall and ceiling in bathroom



Photo 15: Over view of bedroom



Photo 16: Close-up view of suspect VMG on vent in bedroom



Photo 17: View of suspect VMG on north wall in bedroom



Photo 18: View of suspect VMG on west region of south wall in bedroom



Photo 19: View of air filter replacement date



Photo 20: back region of dirty and water stained air return grille



Photo 21: View of air handling unit



Photo 22: View of loose tape on AC plenum



Photo 23: View of hole on AC plenum



Photo 24: View of condensate drain line appears to be improperly sloped away from drain pan



Photo 25: View of a section of the plastic condensate drain line appears to be dried out leaving a water stain mark line



Photo 26: View of condensate drain pan

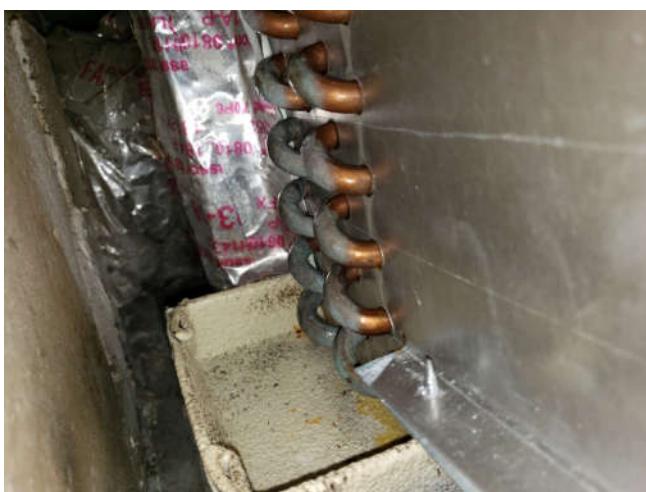


Photo 27: Close-up view of condensate drain pan



Photo 28: View of suspect VMG on sofa in living room



Photo 29: View of suspect VMG beneath coffee table in living room



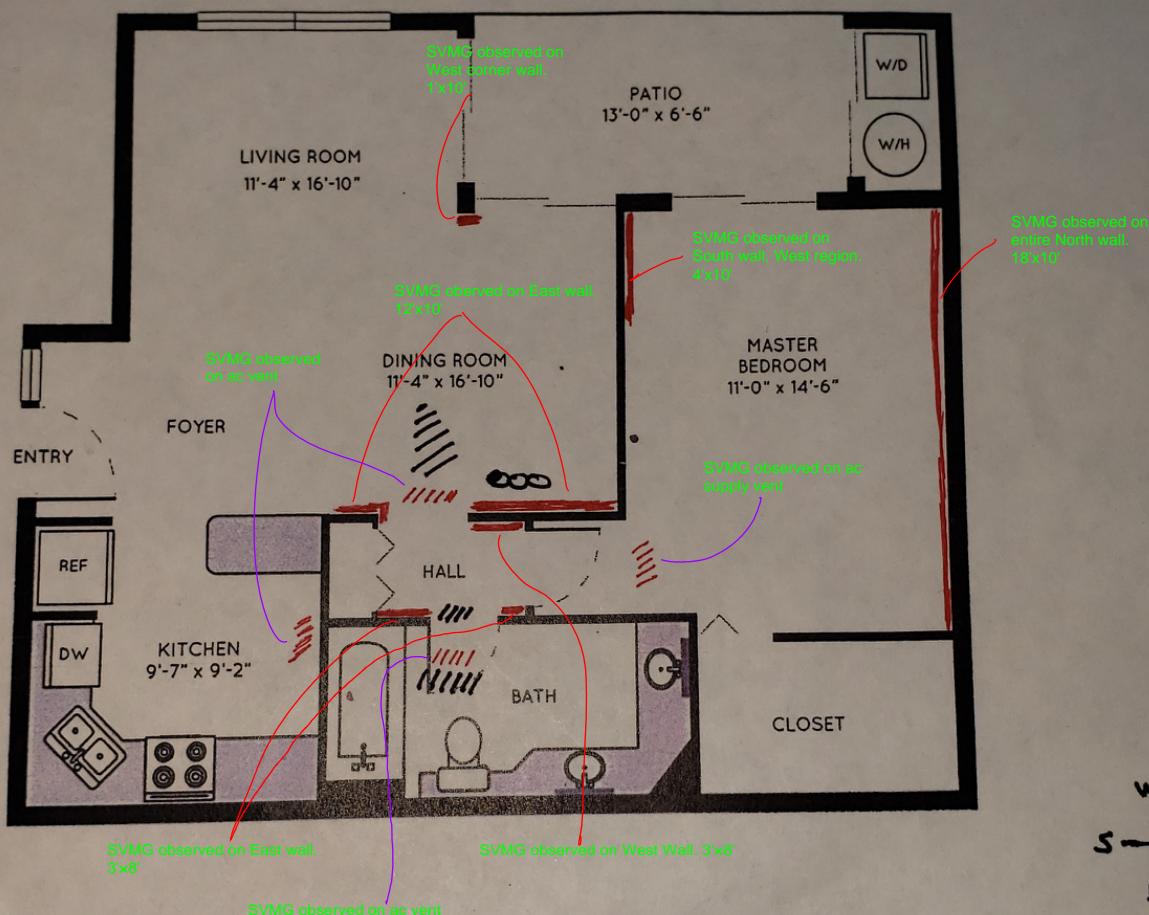
Photo 30: View of suspect VMG beneath table in east region of living room

~~Hydro~~
 Interior
 Temp 76.0 °F
 RH 66.9
 CO₂ 1433 ppm

Exterior
 87.3 °F
 70.4
 498 ppm



unit 169
 8/18/20 Tues



Albaredo	1 Bed	Amenities:	Rent:
	1 Bath	<ul style="list-style-type: none"> - SVMG on Walls - SVMG on Ceiling - SVMG on Vents 	Deposit:
	869 Sq Ft		Fees:

All dimensions and square footage are approximate. Pricing subject to change.



Verona View
 BY ARIUM



Appendix A

Mold Assessor's License



RICK SCOTT, GOVERNOR

JONATHAN ZACHEM, SECRETARY



STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
MOLD-RELATED SERVICES LICENSING PROGRAM

THE MOLD ASSESSOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 468, FLORIDA STATUTES

TOVAR, ALEX ENRIQUE

1820 WEST 53RD STREET APT #514
HIALEAH FL 33012

LICENSE NUMBER: MRSA1837

EXPIRATION DATE: JULY 31, 2020

Always verify licenses online at MyFloridaLicense.com



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