U.S. Micro-Solutions, Inc. * 302 Unity Plaza * Latrobe, PA 15650
Phone: (724) 853-4047   Fax: (724) 853-4049   AIHA-LAP, LLC EMLAP # 103009
www.usmslab.com

LAB0158

| Customer Name:	AGX, Inc.	Sample Date:	September 5, 2019
Customer Address:	207 Pine Creek Road	Date Received:	September 5, 2019
	Wexford, PA 15090	Date of Report:	September 6, 2019
Customer Phone:	(724) 934-4249	Fax:	
PO Number:		Attention:	Amber Brancolini
Project Name/Number:	Summit Township Elementary		

Customer sample numbers below are uniquely identified by prefixing Laboratory #   98774-19

Airborne Spore Trap Analysis   -   AllergencoD
Analytical Method: USMS-M008

Particle ID	Raw ct.	AS	Spores/m³	%	Raw ct.	AS	Spores/m³	%	Raw ct.	AS	Spores/m³	%
Total Volume (L)		75				75						
Sample Number		STE-CON-54				STE-OUT-55						
Location:		Conference Room				Outside						
Alternaria												
Ascospores	2	13	26	5%	183	13	2,379	8%				
Aspergillus/Penicillium-like	14	13	182	35%								
Basidiospores	20	13	260	50%	108	267	28,836	91%				
Bipolaris/Drechslera												
Cercospora												
Chaetomium												
Cladosporium	4	13	52	10%	27	13	351	1%				
Curvularia												
Epicoccum												
Helicomyces												
Nigrospora												
Oidium												
Pithomyces/Ulocladium												
Polythrincium												
Rusts												
Smuts/ Myxomycetes					3	13	39	0%				
Stachybotrys												
Torula												
Trichoderma												
Unidentified dematiaceous conidia												
Unidentified hyaline conidia												
Total Mold (Spores/m³ of air)	40		520		321		31,605					
Pollen	0	13	< 13		0	13	< 13					
Hyphal Fragments					2	13	26					
Insect Fragments												
Plant Fragments												
Skin Cell Fragments			0				1					
Debris			1				1					
Analyst Initials			HC				HC					
Date Analyzed			09/05/19				09/05/19					
Cassette Serial # / Exp Date:			2937552 03/2020				2937567 03/2020					

Entire trace analyzed. Results relate only to the samples tested. Results are reported as calculated. For biological data, the first and/or second digit should be considered significant. Total percentage may not equal 100% due to rounding. Percentages reported as 0% are greater than 0 and less than 0.5%. The *Aspergillus/Penicllium*-like category cannot be differentiated by non-viable sampling methods.

AS=Analytical Sensitivity (spore/m³); Blank Lines = None Detected
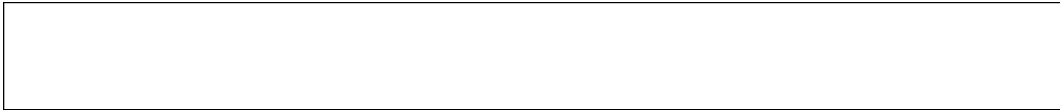
Technical Manager: *Sharon Fanchalsky*
Sharon Fanchalsky, AS, MLT (ASCP)

SPORE TRAP INTERPRETATION TIPS

Currently there are no numeric standards for indoor airborne or surface microbial contamination. Suggested guidelines are constantly being reviewed and updated as more information is collected.

Some common denominators should be considered when interpreting results:

1. Comparison of indoor/outdoor concentration ratios.

2. Complaint vs. non-complaint areas or affected vs. non-affected areas.

3. Consider air exchange rates and activity levels in a building structure, weather, and season of the year.

4. Rank order assessment and concentration (e.g. Spores/m^3 of air) of the fungi.

5. Predominant fungal genera: Are there water indicator microorganisms present, such as but not limited to: *Chaetomium*, *Stachybotrys*, *Rhodotorula*, *Trichoderma*, and *Scopulariopsis*.

6. Generally the fungal counts indoors should be lower than outdoor counts and the types of fungi found indoors should be similar to outdoors.

7. There is always a potential bias from infiltration of outdoor air, poor housekeeping, excessive indoor relative humidity, or potential contamination sources (e.g. water intrusion through a basement wall) that may negatively influence post remedial verification (PRV) or clearance levels.

8. The investigator should look for various patterns among the indoor types of molds detected:

   a. Increased levels of primary (1st) colonizers in damp or moisture intrusion areas of homes or commercial buildings: **Aspergillus/Penicillium** or **Cladosporium** are usually noted.

   b. **Chaetomium** or **Stachybotrys** are tertiary (3rd) colonizers of indoor materials and are usually associated with chronic long standing water/moisture issues in a building.

   c. The presence of **hyphal fragments** or **fruiting structures** noted on spore trap samples usually indicates amplification (growth) of fungi on building substrates.

   d. **Ascospores** and **basidiospores** noted on indoors spore trap samples most often represent the entrance of inadequately filtered outdoor air. During inclement weather, remember to note time, temperature, and season. Most indoor materials will not support the growth of these fungi.

9. When unidentified hyaline (clear) or dematiaceous (dark-pigmented) conidia are noted on a spore trap sample, it indicates that no particular fungus can be identified. These fungal conidia may represent such yeast-like fungi as *Aureobasidium*, *Sporidiobolus*, unidentifiable *Acremonium* species, Basidiomycetes (basidiospores), and Ascomycetes (ascospores).

10. Keep in mind when interpreting spore trap sample reports, that indoor levels may be higher than corresponding outdoor levels (winter time in the Northern U.S.) with a predominance of *Aspergillus/Penicillium* or *Cladosporium* conidia with no significant amplification of any molds.

SPORE TRAP GUIDELINES FOR INDOOR MICROBIAL CONTAMINATION

DEBRIS RATING for SPORE TRAP ANALYSIS (using 600X magnification) (Air-O-Cell, Micro 5, Allergenco D, Cyclex d, VersaTrap, etc.)		
DEBRIS RATING	**CONDITIONS FOR REPORTING DEBRIS RATING**	**SIGNIFICANCE**
0	A visible trace, including particulates and debris, is not observed.	Indicates the sample was a blank, the area is exceptionally clean, or improper sampling occurred.
1	Debris is present and <10% of the average viewing field is obscured.	Minimal amount of debris is observed.
2	Debris is present and 10% to <40% of the average viewing field is obscured.	Low amount of debris is observed, counts may be affected.
3*	Debris is present and 40% to 75% of the average viewing field is obscured.	Moderate amount of debris is observed, counts of conidia/hyphal fragments may be underestimated.
4*	Debris is present and >75% of the average viewing field is obscured.	High amount of debris is observed, counts are estimated.
5* See Relative Abundance chart below	Excessive debris is present	Periphery of trace analyzed. Relative amounts of conidia/hyphal fragments noted. Suggest recollection.
6	Slide completely obscured by excessive debris.	Unable to analyze. Recollect sample.

* A rating of 3 or greater indicates that the accuracy of the analysis is likely affected.

RELATIVE ABUNDANCE of OBSERVED CONIDIA & HYPHAL FRAGMENTS	
RATING	**Relative Amounts of Observed Fungal Structures per high power field (600X)**
Rare	0-1
Few	2 to 5
Moderate	6 to 10
Many	11 to 100
Numerous	>100

SKIN CELL ANALYSIS	
SKIN CELL RATING	**Relative Amounts of Observed Skin Cells per high power field (600X)**
0	No skin cells present
1	0-1
2	2 to 5
3	6 to 10
4	11 to 15
5	≥16

End of Report