



January 26, 2017

Allison S. Smith, Ph.D.  
Brownfields Program Manager  
Develop Louisville  
LOUISVILLE FORWARD  
444 S. Fifth St.  
Louisville, KY 40202

**RE: Limited Microbial Evaluation**  
Urban Government Center  
810 Barret Avenue  
Louisville, Kentucky  
ATC Project Number: Z027000310

Dear Ms. Smith:

ATC Group Services LLC (ATC) performed a limited microbial evaluation for the Urban Government Center former hospital, herein referred to as the site, which is located at 810 Barret Avenue located in Louisville, Kentucky. This report presents observations, opinions, and recommendations for corrective actions based on this assessment.

## **SITE INFORMATION**

The site structure is a multiple story building that previously operated as the former hospital of the Urban Government Center.

## **SCOPE OF SERVICES**

ATC was requested to visually observe the structure's interior for evidence of suspect water damage, microbial growth, or other factors that may be contributing to poor indoor air quality (IAQ).

## **METHODS**

This evaluation of the space was performed in accordance with the ASTM standard E2418-06, Standard Guide for Readily Observable Mold and Conditions Conducive to Mold in Commercial Buildings: Baseline Survey Process.

The following specific assessment method was utilized during this survey in an attempt to validate this concern:

**Visual Observation** – Evaluation of the building included observation of accessible areas within the structure, the building mechanical and ventilation systems, interviews with knowledgeable building representatives regarding the water intrusion history in the building, and observation of building materials for evidence of water damage and suspect microbial growth.

**Total Countable Fungal Bioaerosol Samples** - For microbial air sample collection, a high volume calibrated sample pump and Air-O-Cell™ cassettes were utilized for the collection of airborne fungal spore samples. Samples were collected at a flow rate of 15 liters per minute for 10 minutes for both the interior and exterior samples. Analytical results from the bioaerosol sampling and the laboratory report is included in **Attachment I**.

The samples were submitted under chain-of-custody to EMSL Analytical in Indianapolis, Indiana for analysis of predominant mold species and concentrations. EMSL Laboratories is fully accredited in the American Industrial Hygiene Association (AIHA) Environmental Microbiological Proficiency Analytical Testing (EMPAT) quality control/quality assurance program. It should be noted that sample locations/descriptions within the report may

be modified from the original sample identification given on the chain-of-custody in order to clarify the sample's actual location (i.e., more descriptive). The analytical results and chain of custody are attached.

## OBSERVATIONS

The survey was conducted on December 5, 2016 by ATC representative, Mr. Timothy Gish. A synopsis of Mr. Gish's observations of the Urban Government Center included:

### General Observations

TABLE 1 – OBSERVATIONS SUMMARY			
Location	Observations	Quantity VMG/WD	Potential Water Source
<b>First Floor</b>			
FS-39	Water damage was observed.	80 SF	Damaged Ceilings/Roof.
FS-81	Water damage was observed	N/A	Damaged Ceilings/Roof.
FS-86	Suspect visible mold growth was observed.	N/A	Damaged Ceilings/Roof.
FS-88	Water damage was observed.	N/A	Damaged Ceilings/Roof.
FS-95	Suspect visible mold growth was observed on the floor and ceiling tile.	1600 SF	Damaged Ceilings/Roof.
FS-96	Suspect visible mold growth was observed under the mats.	960 SF	Damaged Ceilings/Roof.
All of First Floor	Suspect visible mold growth was observed on the pipe insulation above the ceiling grid throughout the first floor.	N/A	Damaged Ceilings/Roof.
	Water stained ceiling tile was observed throughout the first floor.		
<b>Second Floor</b>			
2-FS-2 (Hall)	Water damage was observed on the wall plaster.	20 SF	Damaged Ceilings/Roof.
2-FS-4	Water damage was observed on the wall plaster.	4 SF	Damaged Ceilings/Roof.
2-FS-7	Water damage was observed on the wall plaster.	24 SF	Damaged Ceilings/Roof.
2-FS-18	Water damage was observed on the wall plaster.	4 SF	Damaged Ceilings/Roof.
2-FS-20	Water damage was observed on the wall plaster.	10 SF	Damaged Ceilings/Roof.
2-FS-89	Water damage was observed on the wall plaster.	25 SF	Damaged Ceilings/Roof.
2-FS-90	Water damage was observed on the ceiling plaster.	10 SF	Damaged Ceilings/Roof.
2-FS-92	Significant Water damage was observed on the ceiling plaster.	200 SF	Damaged Ceilings/Roof.
2-FS-93	Suspect visible mold growth was observed on the duct insulation.	300 SF	Damaged Ceilings/Roof.
2-FS-94	Water damage was observed on the wall plaster.	10 SF	Damaged Ceilings/Roof.
2-FS-103	Water damage was observed on the wall plaster.	20 SF	Damaged Ceilings/Roof.
2-FS-119	Water damage was observed on the wall plaster.	40 SF	Damaged Ceilings/Roof.
<b>Third Floor</b>			
3-FS-7	Significant water damage was observed on the wall plaster.	70 SF	Damaged Ceilings/Roof.
3-FS-19	Water damage was observed on the wall plaster.	40 SF	Damaged Ceilings/Roof.
3-FS-25	Water damage was observed on the wall plaster.	10 SF	Damaged Ceilings/Roof.
3-FS-44	Water damage was observed on the wall plaster.	20 SF	Damaged Ceilings/Roof.
3-FS-45	Water damage was observed on the wall plaster.	10 SF	Damaged Ceilings/Roof.
3-FS-54	Water damage was observed on the wall plaster.	10 SF	Damaged Ceilings/Roof.
3-FS-62	Water damage was observed on the wall plaster.	40 SF	Damaged Ceilings/Roof.

**TABLE 1 – OBSERVATIONS SUMMARY**

Location	Observations	Quantity VMG/WD	Potential Water Source
3-FS-76	Water damage was observed on the wall plaster.	5 SF	Damaged Ceilings/Roof.
3-FS-80	Water damage was observed on the ceiling plaster.	2 SF	Damaged Ceilings/Roof.
3-FS-93	Significant water damage was observed on the ceiling plaster.	60 SF	Damaged Ceilings/Roof.
<b>Fourth Floor</b>			
4-FS-1	Water damage was observed on wall plaster.	20 SF	Damaged Ceilings/Roof.
4-FS-28	Suspect visible mold growth was observed on the wall.	40 SF	Damaged Ceilings/Roof.
<b>Fifth Floor</b>			
5-FS-10	Suspect visible mold growth was observed on the wall. Water damage was observed on the wall plaster.	40 SF VMG 20 SF WD	Damaged Ceilings/Roof.
5-FS-44	Water damage was observed on the wall plaster.	20 SF	Damaged Ceilings/Roof.
5-FS-51	Water damage was observed on the wall plaster.	20 SF	Damaged Ceilings/Roof.
5-FS-52	Water damage was observed on the wall plaster.	20 SF	Damaged Ceilings/Roof.
5-FS-61	Suspect visible mold growth was observed on the wall plaster and ceiling tile.	200 SF	Damaged Ceilings/Roof.
5-FS-64	Water damage was observed on wall plaster.	10 SF	Damaged Ceilings/Roof.
5-FS-65	Water damage was observed on the wall plaster.	40 SF	Damaged Ceilings/Roof.
5-FS-70	Water damage was observed on the wall plaster.	100 SF	Damaged Ceilings/Roof.
<b>Sixth Floor</b>			
6-FS-37	Suspect visible mold growth was observed on the carpet with ceiling tile debris and on pipe insulation above the ceiling tile.	150 SF	Damaged Ceilings/Roof.
6-FS-38	Water damage was observed on the wall plaster.	160 SF	Damaged Ceilings/Roof.
6-FS-44	Suspect visible mold growth was observed on the carpet.	140 SF	Damaged Ceilings/Roof.
6-FS-49	Suspect visible mold growth was observed on the carpet.	140 SF	Damaged Ceilings/Roof.
6-FS-50	Suspect visible mold growth was observed on the carpet.	140 SF	Damaged Ceilings/Roof.
6-FS-57	Suspect visible mold growth was observed on the carpet.	140 SF	Damaged Ceilings/Roof.
6-FS-58	Suspect visible mold growth on the carpet.	140 SF	Damaged Ceilings/Roof.
6-FS-59	Suspect visible mold growth on the carpet.	140 SF	Damaged Ceilings/Roof.
<b>Seventh Floor</b>			
7-FS-2	Suspect visible mold growth was observed on the wall.	10 SF	Damaged Ceilings/Roof.
7-FS-4	Suspect visible mold growth was observed on the wall.	20 SF	Damaged Ceilings/Roof.
7-FS-10	Water damage was observed on the wall plaster.	20 SF	Damaged Ceilings/Roof.
7-FS-11(Hall)	Water damage on the wall plaster.	100 SF	Damaged Ceilings/Roof.
7-FS-13	Suspect visible mold growth was observed on the floor and wall.	160 SF	Damaged Ceilings/Roof.
7-FS-23	Water damage was observed on the wall plaster.	80 SF	Damaged Ceilings/Roof.
7-FS-31	Water damage was observed on the ceiling plaster.	200 SF	Damaged Ceilings/Roof.
7-FS-33	Suspect visible mold growth was observed on the wall plaster.	200 SF	Damaged Ceilings/Roof.
7-FS-43	Water damage was observed on the wall plaster.	60 SF	Damaged Ceilings/Roof.
7-FS-48	Suspect visible mold growth was visible on the carpet.	140 SF	Damaged Ceilings/Roof.
7-FS-50	Suspect visible mold growth was observed on the carpet.	140 SF	Damaged Ceilings/Roof.

**TABLE 1 – OBSERVATIONS SUMMARY**

Location	Observations	Quantity VMG/WD	Potential Water Source
7-FS-56	Water damage was observed on the wall plaster.	30 SF	Damaged Ceilings/Roof.
7-FS-66	Water damage was observed on the wall plaster.	50 SF	Damaged Ceilings/Roof.
7-FS-67	Water damage was observed on the wall plaster.	100 SF	Damaged Ceilings/Roof.
7-FS-68	Water damage was observed on the ceiling tile.	200 SF	Damaged Ceilings/Roof.
7-FS-69	Water damage was observed on the wall plaster.	20 SF	Damaged Ceilings/Roof.
7-FS-70	Suspect visible mold growth was observed on the ceiling tile.	60 SF	Damaged Ceilings/Roof.
7-FS-71	Significant suspect visible mold growth was observed on the walls and ceiling.	500 SF	Damaged Ceilings/Roof.
7-FS-72	Suspect visible mold growth was observed on the ceiling tile.	300 SF	Damaged Ceilings/Roof.
7-FS-73	Suspect visible mold growth was observed on ceiling tile.	100 SF	Damaged Ceilings/Roof.
7-FS-74	Suspect visible mold growth was observed on the ceiling tile.	150 SF	Damaged Ceilings/Roof.
<b>Stairwells</b>			
Stairwell 1	Water damage was observed on the wall plaster between the third and fourth floor.	20 SF	Damaged Ceilings/Roof.
	Water damage was observed on the wall plaster between the fourth and fifth floor, and the fifth and sixth floor.	40 SF	
	Water damage was observed on the wall plaster between the sixth and seventh floor.	100 SF	
Stairwell 2	Water damage was observed on the wall and ceiling plaster between the seventh floor and the penthouse mechanical room.	100 SF	Damaged Ceilings/Roof.
	Water damage was observed on the wall plaster between the first and second floor.	50 SF	
Stairwell 3	Water damage was observed on the wall plaster between the sixth and seventh floor.	50 SF	Damaged Ceilings/Roof.
	Suspect visible mold growth was observed on the ceiling tile on the seventh floor.	4 SF	
Stairwell 4	No suspect visible mold growth or water damage was observed.		Damaged Ceilings/Roof.
Stairwell 5	Suspect visible mold growth was observed on the drywall on the third level.	2 SF	Damaged Ceilings/Roof.
	Suspect visible mold growth and water damage was observed on the fourth and fifth level.	12 SF	
	Suspect visible mold growth and water damage was observed between the sixth and seventh floor.	100 SF	
	Water staining was observed throughout the entire stairwell.	400 SF	

**TABLE 1 – OBSERVATIONS SUMMARY**

Location	Observations	Quantity VMG/WD	Potential Water Source
Stairwell 6	Water damage was observed on the wall and ceilings between the seventh floor and penthouse mechanical room.	200 SF	Damaged Ceilings/Roof.
	Water damage was observed on the wall plaster between the second and third floors.	8 SF	
Stairwell 7	Suspect visible mold growth was observed on the wall plaster on the first floor level.	50 SF	Damaged Ceilings/Roof.
	Water damage was observed on the wall plaster between the second and third floor.	20 SF	
	Water damage was observed on the wall and ceiling plaster between the seventh floor and the penthouse mechanical room.	150 SF	
Stairwell 8	Suspect visible mold growth was observed on the drywall on the sixth floor level.	260 SF	Damaged Ceilings/Roof.
	Suspect visible mold growth was observed on the drywall between the fourth and fifth floor.	200 SF	
	Suspect visible mold growth was observed on the drywall between the third and fourth floor.	200 SF	
	Suspect visible mold growth was observed on the drywall on the second and third floor.	200 SF	
	Suspect visible mold growth was observed on the drywall between the first and second floor.	300 SF	
	Water staining was observed throughout the entire Stairwell 8.		

**MICROBIOLOGICAL ANALYSIS**

The results of the fungal bioaerosol sample event are referenced in attached analytical reports, **Attachment I**

**Interpretation of Data:**

Fungal bioaerosols include aerosolized components of fungi (generally molds), such as spores and hyphal or mycelial fragments. Spore trap samples were utilized to screen the building for bioaerosols indicative of hidden indoor reservoirs of molds.

The laboratory calculates an estimated concentration of fungal bioaerosols based on the number of identifiable spores observed in the sample trace and the volume of air drawn through the spore trap cassette. In this case, the laboratory’s minimum reporting level was approximately four hundred and ninety four (494) spores (or fungal structures) per cubic meter of air sampled.

The American Conference of Governmental Industrial Hygienists (ACGIH) considers comparison of indoor/outdoor bioaerosol data a common method for evaluating indoor fungal damage or concerns. In normal indoor environments, the concentrations of fungi in the indoor air are typically equal to, or less than, the concentration outdoors and the fungal taxa detected should be similar. If indoor fungal bioaerosol concentrations are consistently greater than those outdoors, then indoor fungal reservoirs may be present. In addition, the types

(i.e., taxa or groups) of fungi found inside the building should be qualitatively similar compared with the outdoor air, if the outdoor air is the only source of fungi. There are no regulatory standards or other widely accepted numerical guidelines available for interpretation of bioaerosol data.

Suspect visible mold growth and water damage was observed throughout the former hospital. The estimated total indoor fungal bioaerosol concentrations detected inside the building were less than the total estimated bioaerosol concentrations of the background outdoor samples, however the 4<sup>th</sup> floor elevator lobby and 6<sup>th</sup> floor Room 667 had elevated spore types higher or not identified on the outdoor sample, indicating water intrusion.

## CONCLUSIONS

Based on observations and analysis of environmental samples, mold growth does appear to present within the building, however there does not appear to be a cause for concern for exposure to fungal bioaerosols indoors in its current condition.

ATC also observed the HVAC system was not in use and indoor wall registers were removed, leaving vents open to the outside. Based on observations, there is the potential for exposure to fungal bioaerosols if the HVAC system is to become operational. It is recommended to identify and repair the source of the water intrusion and remediated the VMG prior to the use of the HVAC system.

## LIMITATIONS

The services provided for these assignments were performed with the skill and care ordinarily exercised by reputable members of the industrial hygiene profession practicing under similar conditions at the same time or similar locality. Any future or currently occurring moisture problems within or around the structure may create an environment that would allow for mold growth and affect the indoor air quality within the structure.

It should be understood that fungal spores are ubiquitous to our environment and that background fungal spore counts naturally occur in outdoor and indoor air and in the dust within occupied structures. The concentrations of these organisms are variable and depend on factors including climate, effectiveness of the HVAC system, general housekeeping and maintenance, original construction of the structure, among many others.

The work performed in conjunction with this assessment and the data developed is intended as a description of available information at the dates and locations given. This report does not warrant against future operations or conditions, nor does it warrant against extant, or future, conditions of a type or at a location not investigated.

ATC is not liable for the discovery and elimination of hazards that may potentially cause damage, accidents, injury, or disease. The conclusions and recommendations presented in this report are based on a reasonable level of evaluation within the normal bounds and standards of professional practice for an evaluation of this nature. The recommendations have no relationship to insurance coverage. This document is not a legal mandate and should be used as a guideline only. It is important to note that the reported microbial levels are only reflective of conditions at the time of this test and that microbial populations can vary over time, depending upon a number of conditions, including environmental factors (i.e., temperature and relative humidity).

No expressed or implied warranty is made or intended by the rendition of these consulting services or by furnishing oral or written reports of the findings made. ATC reserves the right to revise or amend our opinion in this report in the event new information, documentation, or evidence becomes available.

The report is designed to aid the building owner, architect, construction manager, general contractors, and potential remediation contractors in locating possible hazards. **Under no circumstances is the report to be utilized as a bidding document or as a project specification document since it does not have all the components required to serve as a Project Design, or Remediation Work Plan.**

The client agrees to notify the appropriate local, state, or federal public agencies as required by law, or otherwise to disclose, in a timely manner, information that may be necessary to prevent any danger to public health, safety, or the environment.

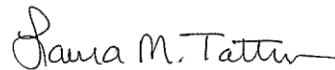
ATC appreciates the opportunity to be of service to Louisville Metro Government on this project and we look forward to working with you on future assignments. In the meantime, if you have questions or comments regarding the information in this report or if we can be of further assistance, please do not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

Sincerely,

**ATC Group Services LLC**



Sarah Coffenberry  
Industrial Hygienist  
Direct Line +1 317 579 4056  
Email: [sarah.coffenberry@atcassociates.com](mailto:sarah.coffenberry@atcassociates.com)



Laura M. Totten  
Industrial Hygiene Group Manager  
Direct Line +1 317 579 4081  
Email: [laura.totten@atcassociates.com](mailto:laura.totten@atcassociates.com)

Attachment: Attachment I Microbial Non-Viable Laboratory Reports

**ATTACHMENT I**  
**LABORATORY ANALYSIS**





# EMSL Analytical, Inc.

2001 East 52nd St. Indianapolis, IN 46205  
Tel/Fax: (317) 803-2997 / (317) 803-3047  
<http://www.EMSL.com / indianapolislab@emsl.com>

**EMSL Order:** 161623442  
**Customer ID:** ATEC57  
**Customer PO:**  
**Project ID:**

**Attn:** Laura Totten  
ATC Group Services LLC  
7988 Center Point Drive  
Suite 100  
Indianapolis, IN 46256

**Phone:** (317) 579-4081  
**Fax:** (317) 849-4278  
**Collected:** 12/05/2016  
**Received:** 12/16/2016  
**Analyzed:** 12/21/2016 - 12/22/2016

**Project:**

### Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number:	161623442-0001			161623442-0002			161623442-0003		
Client Sample ID:	810-01			810-02			810-03		
Volume (L):	150			150			150		
Sample Location	Exterior N Side			Main Lobby 1st Fl			East Side Hall 1st Fl		
Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria	-	-	-	-	-	-	1	20	0.9
Ascospores	29	610	7.5	13	270	17.2	9	200	8.9
Aspergillus/Penicillium	1	20	0.2	15	320	20.4	20	420	18.7
Basidiospores	332	7010	86.1	25	530	33.8	53	1100	49
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	21	440	5.4	19	400	25.5	22	460	20.5
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	5*	30*	0.4	1*	7*	0.4	1	20	0.9
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1	20	0.2	1	20	1.3	1	20	0.9
Pithomyces	1*	7*	0.1	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	1	20	1.3	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Cercospora	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	1*	7*	0.3
Pestalotiopsis	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>390</b>	<b>8137</b>	<b>100</b>	<b>75</b>	<b>1567</b>	<b>100</b>	<b>108</b>	<b>2247</b>	<b>100</b>
Hypchal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	2	40	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-	-	3	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum  
Myxomycetes++ = Myxomycetes/Periconia/Smut

Nathan Husted, Microbiology Laboratory Manager  
or other approved signatory

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

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. ""\*"" Denotes particles found at 300X. ""\*"" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN AIHA-LAP, LLC--EMLAP 157245

Initial report from: 12/22/2016 11:04:14

For information on the fungi listed in this report, please visit the Resources section at [www.emsl.com](http://www.emsl.com)



# EMSL Analytical, Inc.

2001 East 52nd St. Indianapolis, IN 46205  
Tel/Fax: (317) 803-2997 / (317) 803-3047  
<http://www.EMSL.com / indianapolislab@emsl.com>

**EMSL Order:** 161623442  
**Customer ID:** ATEC57  
**Customer PO:**  
**Project ID:**

**Attn:** Laura Totten  
ATC Group Services LLC  
7988 Center Point Drive  
Suite 100  
Indianapolis, IN 46256

**Phone:** (317) 579-4081  
**Fax:** (317) 849-4278  
**Collected:** 12/05/2016  
**Received:** 12/16/2016  
**Analyzed:** 12/21/2016 - 12/22/2016

**Project:**

### Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location	161623442-0004 810-04 150 NW Corner FS 87 1st Fl			161623442-0005 810-05 150 Weight Rm FS 95 1st Fl			161623442-0006 810-06 150 Elev Lobby FS 1 2nd Fl		
	Spore Types	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>
Alternaria	1*	7*	0.7	-	-	-	-	-	-
Ascospores	5	100	9.4	14	300	13.2	18	380	11.1
Aspergillus/Penicillium	6	100	9.4	34	720	31.8	20	420	12.2
Basidiospores	36	760	71.2	50	1100	48.5	112	2360	68.8
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	7	100	9.4	5	100	4.4	11	230	6.7
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	2	40	1.2
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	1	20	0.9	-	-	-
Myxomycetes++	-	-	-	1*	7*	0.3	-	-	-
Pithomyces	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	3*	20*	0.9	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Cercospora	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Pestalotiopsis	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>55</b>	<b>1067</b>	<b>100</b>	<b>108</b>	<b>2267</b>	<b>100</b>	<b>163</b>	<b>3430</b>	<b>100</b>
Hypthal Fragment	-	-	-	1	20	-	1	20	-
Insect Fragment	-	-	-	-	-	-	1	20	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum  
Myxomycetes++ = Myxomycetes/Periconia/Smut

Nathan Husted, Microbiology Laboratory 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. Indianapolis, IN AIHA-LAP, LLC--EMLAP 157245

Initial report from: 12/22/2016 11:04:14

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2001 East 52nd St. Indianapolis, IN 46205  
Tel/Fax: (317) 803-2997 / (317) 803-3047  
<http://www.EMSL.com / indianapolislab@emsl.com>

**EMSL Order:** 161623442  
**Customer ID:** ATEC57  
**Customer PO:**  
**Project ID:**

**Attn:** Laura Totten  
ATC Group Services LLC  
7988 Center Point Drive  
Suite 100  
Indianapolis, IN 46256  
**Project:**

**Phone:** (317) 579-4081  
**Fax:** (317) 849-4278  
**Collected:** 12/05/2016  
**Received:** 12/16/2016  
**Analyzed:** 12/21/2016 - 12/22/2016

### Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location	161623442-0007 810-07 150 West Side Hall 2nd Fl			161623442-0008 810-08 150 NW Corner 2nd Fl			161623442-0009 810-09 150 SW Corner Hall 2nd Fl		
	Spore Types	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>
Alternaria	-	-	-	2*	10*	0.4	-	-	-
Ascospores	7	100	6.5	21	440	17.1	19	400	11.3
Aspergillus/Penicillium	24	510	32.9	9	200	7.8	4	80	2.3
Basidiospores	35	740	47.7	70	1500	58.4	119	2510	71
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	8	200	12.9	15	320	12.5	24	510	14.4
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	1	20	0.8	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	2*	10*	0.4	-	-	-
Myxomycetes++	-	-	-	2	40	1.6	1*	7*	0.2
Pithomyces	-	-	-	-	-	-	1*	7*	0.2
Rust	-	-	-	1	20	0.8	1	20	0.6
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Cercospora	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	1*	7*	0.3	-	-	-
Pestalotiopsis	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>74</b>	<b>1550</b>	<b>100</b>	<b>124</b>	<b>2567</b>	<b>100</b>	<b>169</b>	<b>3534</b>	<b>100</b>
Hypthal Fragment	-	-	-	1	20	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	2	-	-	1	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum  
Myxomycetes++ = Myxomycetes/Periconia/Smut

Nathan Husted, Microbiology Laboratory Manager  
or other approved signatory

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

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**Project:**

### Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location	161623442-0010			161623442-0011			161623442-0012		
	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
810-10 150 Training Rm FS 47 3rd Fl				810-11 150 Center Hall FS 96 3rd Fl			810-12 150 E Hall N End FS 97 3rd Fl		
<b>Spore Types</b>	<b>Raw Count</b>	<b>Count/m³</b>	<b>% of Total</b>	<b>Raw Count</b>	<b>Count/m³</b>	<b>% of Total</b>	<b>Raw Count</b>	<b>Count/m³</b>	<b>% of Total</b>
Alternaria	1*	7*	0.6	-	-	-	-	-	-
Ascospores	9	200	15.8	24	510	25.4	27	570	25.6
Aspergillus/Penicillium	4	80	6.3	3	60	3	10	210	9.4
Basidiospores	33	700	55.3	63	1300	64.7	46	970	43.5
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	11	230	18.2	7	100	5	19	400	17.9
Curvularia	1*	7*	0.6	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	1*	7*	0.6	1	20	1	1	20	0.9
Myxomycetes++	-	-	-	-	-	-	2	40	1.8
Pithomyces	-	-	-	-	-	-	1	20	0.9
Rust	-	-	-	1	20	1	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Cercospora	1	20	1.6	-	-	-	-	-	-
Nigrospora	1*	7*	0.6	-	-	-	-	-	-
Pestalotiopsis	-	-	-	-	-	-	-	-	-
Polythrincium	1*	7*	0.6	-	-	-	-	-	-
<b>Total Fungi</b>	<b>63</b>	<b>1265</b>	<b>100</b>	<b>99</b>	<b>2010</b>	<b>100</b>	<b>106</b>	<b>2230</b>	<b>100</b>
Hypthal Fragment	-	-	-	1	20	-	-	-	-
Insect Fragment	-	-	-	-	-	-	1	20	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	1	-	-	2	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum  
Myxomycetes++ = Myxomycetes/Periconia/Smut

Nathan Husted, Microbiology Laboratory Manager  
or other approved signatory

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

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**Project:**

### Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number:	161623442-0013			161623442-0014			161623442-0015		
Client Sample ID:	810-13			810-14			810-15		
Volume (L):	150			150			150		
Sample Location	Elev Lobby 4th Fl			Rm 428 FS 28 4th Fl			Center W Hall FS 102 4th Fl		
Spore Types	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>	% of Total
Alternaria	-	-	-	1*	7*	1.4	-	-	-
Ascospores	15	320	4.2	3	60	12.1	4	80	7.3
Aspergillus/Penicillium	65	1400	18.6	5	100	20.2	6	100	9.1
Basidiospores	10	210	2.8	4	80	16.2	5	100	9.1
Bipolaris++	-	-	-	1	20	4	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	265	5590	74.2	8	200	40.5	39	820	74.5
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	1*	7*	0.1	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	1*	7*	1.4	-	-	-
Myxomycetes++	1*	7*	0.1	-	-	-	-	-	-
Pithomyces	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Cercospora	-	-	-	1	20	4	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Pestalotiopsis	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>357</b>	<b>7534</b>	<b>100</b>	<b>24</b>	<b>494</b>	<b>100</b>	<b>54</b>	<b>1100</b>	<b>100</b>
Hypthal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	1	20	-	-	-	-	1	20	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	3	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	1	-	-	1	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum  
Myxomycetes++ = Myxomycetes/Periconia/Smut

Nathan Husted, Microbiology Laboratory Manager  
or other approved signatory

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

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### Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number:	161623442-0016			161623442-0017			161623442-0018		
Client Sample ID:	810-16			810-17			810-18		
Volume (L):	150			150			150		
Sample Location	Office FS 45 5th Fl			Reception Area 5th Fl			W Hall S End FS 98 5th Fl		
Spore Types	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>	% of Total
Alternaria	-	-	-	-	-	-	-	-	-
Ascospores	2	40	12.5	1	20	12.5	6	100	13.2
Aspergillus/Penicillium	3	60	18.8	1	20	12.5	1	20	2.6
Basidiospores	4	80	25	4	80	50	4	80	10.5
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	6	100	31.3	2	40	25	19	400	52.6
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	1	20	2.6
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	2	40	5.3
Myxomycetes++	2	40	12.5	-	-	-	3	60	7.9
Pithomyces	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	1	20	2.6
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Cercospora	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	1	20	2.6
Pestalotiopsis	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>17</b>	<b>320</b>	<b>100</b>	<b>8</b>	<b>160</b>	<b>100</b>	<b>38</b>	<b>760</b>	<b>100</b>
Hypthal Fragment	-	-	-	-	-	-	2	40	-
Insect Fragment	-	-	-	-	-	-	2	40	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	2	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum  
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or other approved signatory

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Lab Sample Number: Client Sample ID: Volume (L): Sample Location	161623442-0019 810-19 150 Rm 657 FS 6 6th FI			161623442-0020 810-20 150 NW Stairwell 6th FI			161623442-0021 810-21 150 E Hall S End FS 80 6th FI		
Spore Types	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>	% of Total	Raw Count	Count/m <sup>3</sup>	% of Total
Alternaria	1	20	0.3	1*	7*	0.8	1*	7*	0.8
Ascospores	38	800	10.3	7	100	12.1	16	340	36.7
Aspergillus/Penicillium	149	3140	40.5	-	-	-	6	100	10.8
Basidiospores	22	460	5.9	2	40	4.9	3	60	6.5
Bipolaris++	1	20	0.3	-	-	-	-	-	-
Chaetomium	1*	7*	0.1	-	-	-	-	-	-
Cladosporium	124	2620	33.8	27	570	69.2	14	300	32.4
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	5	100	1.3	-	-	-	1	20	2.2
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	7	100	1.3	-	-	-	1	20	2.2
Myxomycetes++	9	200	2.6	-	-	-	2	40	4.3
Pithomyces	3	60	0.8	1*	7*	0.8	1	20	2.2
Rust	1	20	0.3	-	-	-	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	1	20	0.3	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Cercospora	7	100	1.3	5	100	12.1	1	20	2.2
Nigrospora	1	20	0.3	-	-	-	-	-	-
Pestalotiopsis	2	40	0.5	-	-	-	-	-	-
Polythrincium	1	20	0.3	-	-	-	-	-	-
<b>Total Fungi</b>	<b>373</b>	<b>7747</b>	<b>100</b>	<b>43</b>	<b>824</b>	<b>100</b>	<b>46</b>	<b>927</b>	<b>100</b>
Hypthal Fragment	5	100	-	-	-	-	3	60	-
Insect Fragment	9	200	-	1*	7*	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	3	-	-	1	-	-	2	-
Fibrous Particulate (1-4)	-	2	-	-	1	-	-	1	-
Background (1-5)	-	3	-	-	1	-	-	2	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum  
Myxomycetes++ = Myxomycetes/Periconia/Smut

Nathan Husted, Microbiology Laboratory Manager  
or other approved signatory

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

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. \*\*\* Denotes particles found at 300X. "\*" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN AIHA-LAP, LLC--EMLAP 157245

Initial report from: 12/22/2016 11:04:14

For information on the fungi listed in this report, please visit the Resources section at [www.emsl.com](http://www.emsl.com)



# EMSL Analytical, Inc.

2001 East 52nd St. Indianapolis, IN 46205  
Tel/Fax: (317) 803-2997 / (317) 803-3047  
<http://www.EMSL.com / indianapolislab@emsl.com>

**EMSL Order:** 161623442  
**Customer ID:** ATEC57  
**Customer PO:**  
**Project ID:**

**Attn:** Laura Totten  
ATC Group Services LLC  
7988 Center Point Drive  
Suite 100  
Indianapolis, IN 46256  
**Phone:** (317) 579-4081  
**Fax:** (317) 849-4278  
**Collected:** 12/05/2016  
**Received:** 12/16/2016  
**Analyzed:** 12/21/2016 - 12/22/2016

### Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)

Lab Sample Number:	161623442-0022			161623442-0023			161623442-0024		
Client Sample ID:	810-22			810-23			810-24		
Volume (L):	150			150			150		
Sample Location	NE Corner FS 71 7th Fl			Reception Center FS 38 7th Fl			W Hall S End FS 31 7th Fl		
Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria	-	-	-	1	20	1.2	-	-	-
Ascospores	1	20	7.5	4	80	4.7	-	-	-
Aspergillus/Penicillium	-	-	-	50	1100	64.7	2	40	40
Basidiospores	1	20	7.5	8	200	11.8	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	3	60	3.5	-	-	-
Cladosporium	8	200	74.9	8	200	11.8	2	40	40
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	1	20	7.5	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1*	7*	2.6	2	40	2.4	-	-	-
Pithomyces	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis	-	-	-	-	-	-	-	-	-
Stachybotrys	-	-	-	-	-	-	-	-	-
Torula	-	-	-	-	-	-	-	-	-
Ulocladium	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Cercospora	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	1	20	20
Pestalotiopsis	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>12</b>	<b>267</b>	<b>100</b>	<b>76</b>	<b>1700</b>	<b>100</b>	<b>5</b>	<b>100</b>	<b>100</b>
Hypthal Fragment	-	-	-	1	20	-	-	-	-
Insect Fragment	-	-	-	1	20	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	21	-	-	21	-	-	21	-
Analyt. Sensitivity 300x	-	7*	-	-	7*	-	-	7*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	3	-	-	1	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum  
Myxomycetes++ = Myxomycetes/Periconia/Smut

Nathan Husted, Microbiology Laboratory Manager  
or other approved signatory

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

High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. \*\*\* Denotes particles found at 300X. "\*" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN AIHA-LAP, LLC--EMLAP 157245

Initial report from: 12/22/2016 11:04:14

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<http://www.EMSL.com / indianapolislab@emsl.com>

**EMSL Order:** 161623442  
**Customer ID:** ATEC57  
**Customer PO:**  
**Project ID:**

**Attn:** Laura Totten  
ATC Group Services LLC  
7988 Center Point Drive  
Suite 100  
Indianapolis, IN 46256

**Phone:** (317) 579-4081  
**Fax:** (317) 849-4278  
**Collected:** 12/05/2016  
**Received:** 12/16/2016  
**Analyzed:** 12/21/2016 - 12/22/2016

**Project:**

**Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods EMSL 05-TP-003, ASTM D7391)**

<b>Lab Sample Number:</b>	161623442-0025		
<b>Client Sample ID:</b>	810-25		
<b>Volume (L):</b>	150		
<b>Sample Location</b>	Exterior N Side 1st Fl		
<b>Spore Types</b>	<b>Raw Count</b>	<b>Count/m³</b>	<b>% of Total</b>
Alternaria	-	-	-
Ascospores	9	200	36.4
Aspergillus/Penicillium	2	40	7.3
Basidiospores	3	60	10.9
Bipolaris++	-	-	-
Chaetomium	-	-	-
Cladosporium	12	250	45.5
Curvularia	-	-	-
Epicoccum	-	-	-
Fusarium	-	-	-
Ganoderma	-	-	-
Myxomycetes++	-	-	-
Pithomyces	-	-	-
Rust	-	-	-
Scopulariopsis	-	-	-
Stachybotrys	-	-	-
Torula	-	-	-
Ulocladium	-	-	-
Unidentifiable Spores	-	-	-
Cercospora	-	-	-
Nigrospora	-	-	-
Pestalotiopsis	-	-	-
Polythrincium	-	-	-
<b>Total Fungi</b>	<b>26</b>	<b>550</b>	<b>100</b>
Hyphal Fragment	-	-	-
Insect Fragment	-	-	-
Pollen	-	-	-
Analyt. Sensitivity 600x	-	21	-
Analyt. Sensitivity 300x	-	7*	-
Skin Fragments (1-4)	-	1	-
Fibrous Particulate (1-4)	-	1	-
Background (1-5)	-	1	-

Bipolaris++ = Bipolaris/Drechslera/Exserohilum  
Myxomycetes++ = Myxomycetes/Periconia/Smut

Nathan Husted, Microbiology Laboratory Manager  
or other approved signatory

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

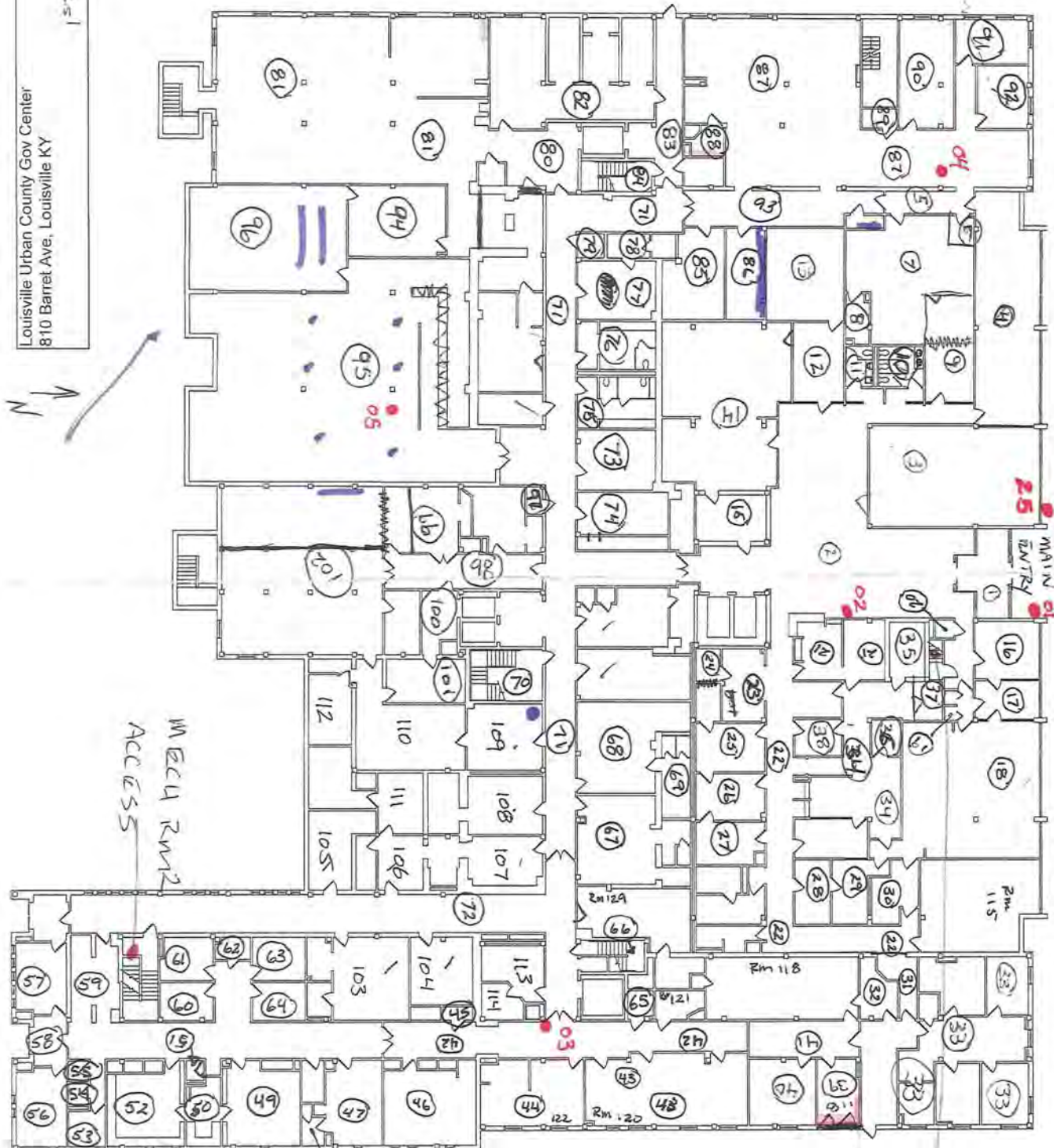
High levels of background particulate can obscure spores and other particulates leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. ""\* Denotes particles found at 300X. ""\* Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted.

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Louisville Urban County Gov Center  
810 Barret Ave, Louisville KY



MEDIA RM 2  
ACCESS

WITCH RM 1  
ACCESS  
103  
114

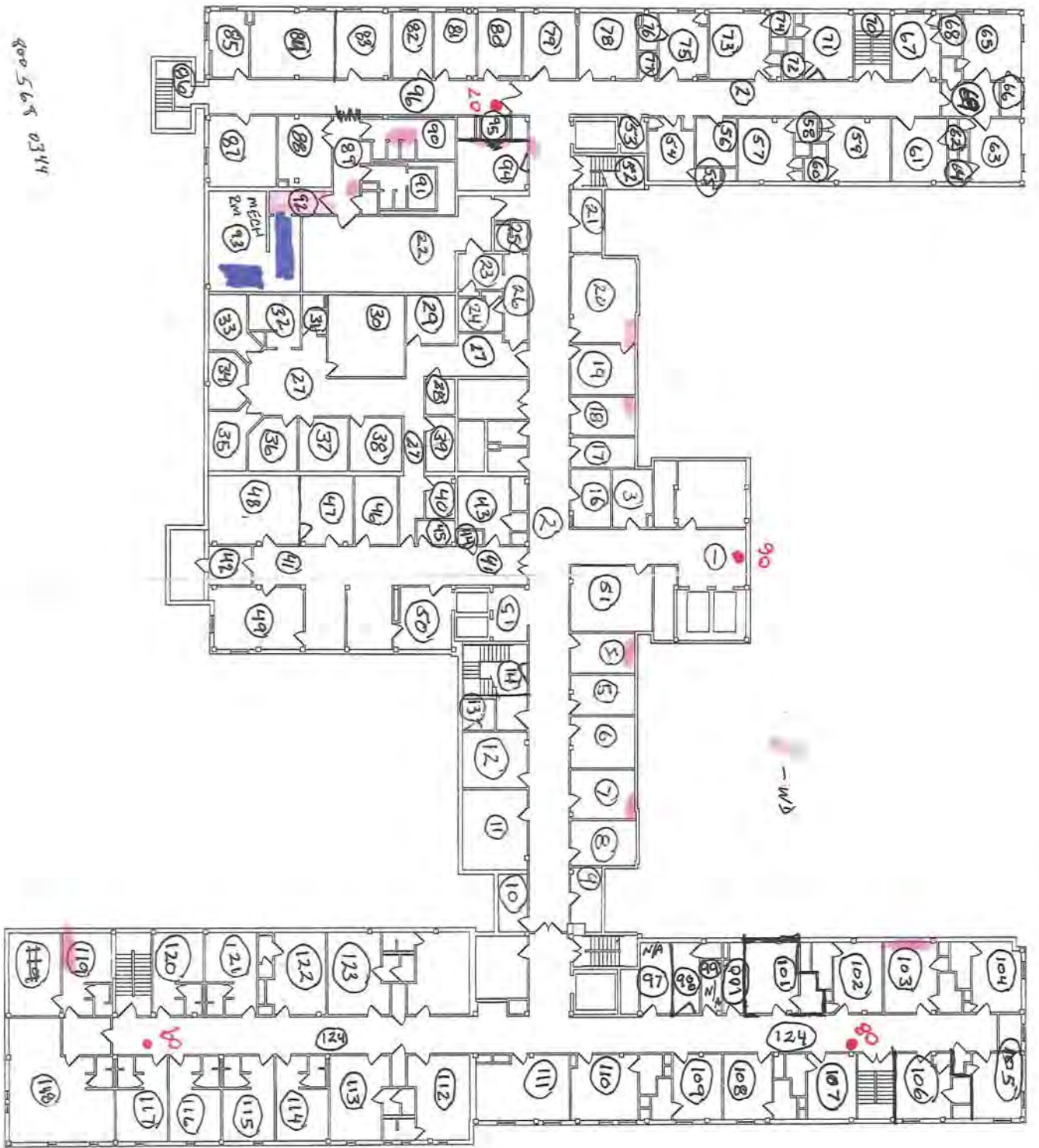
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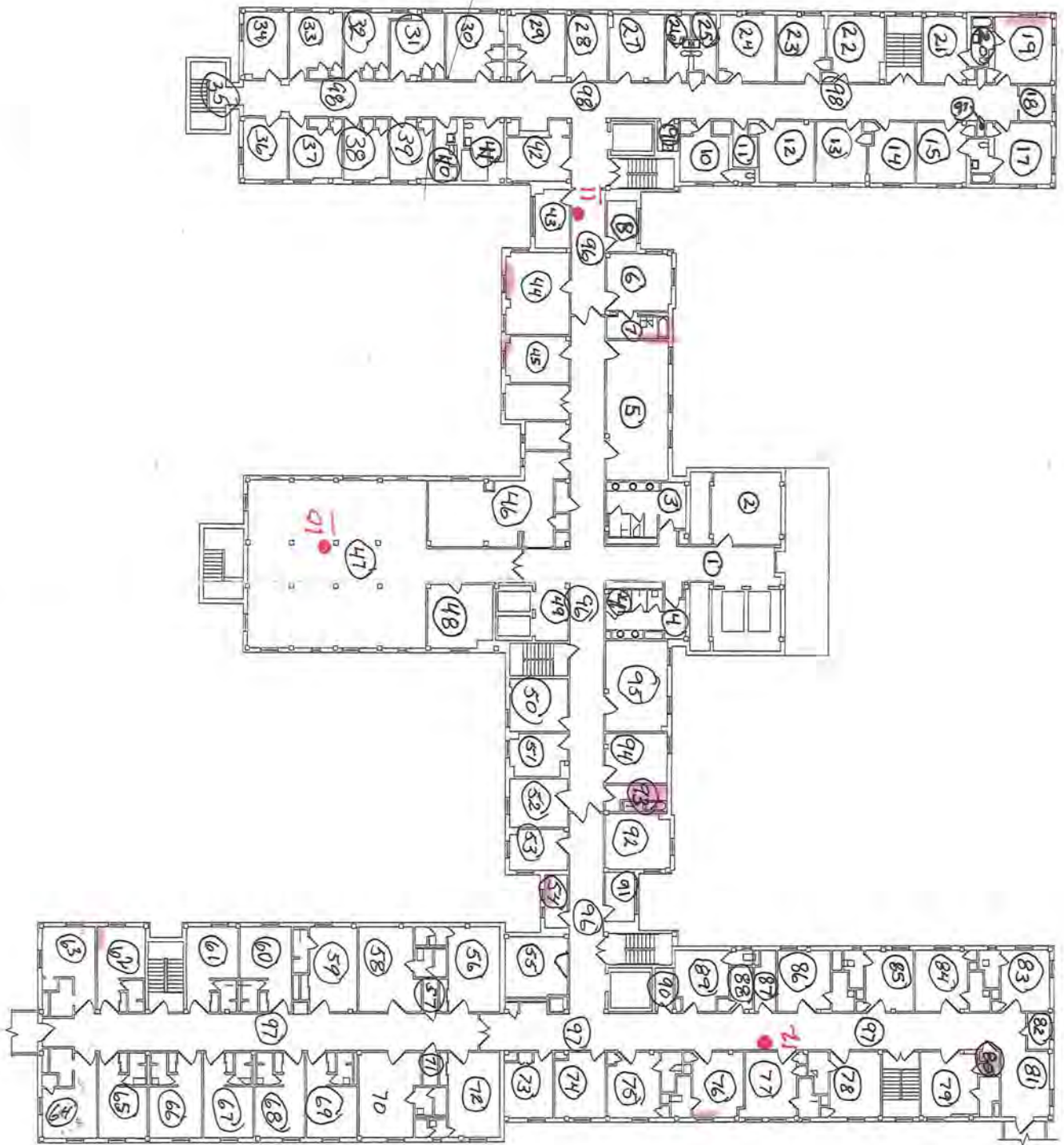
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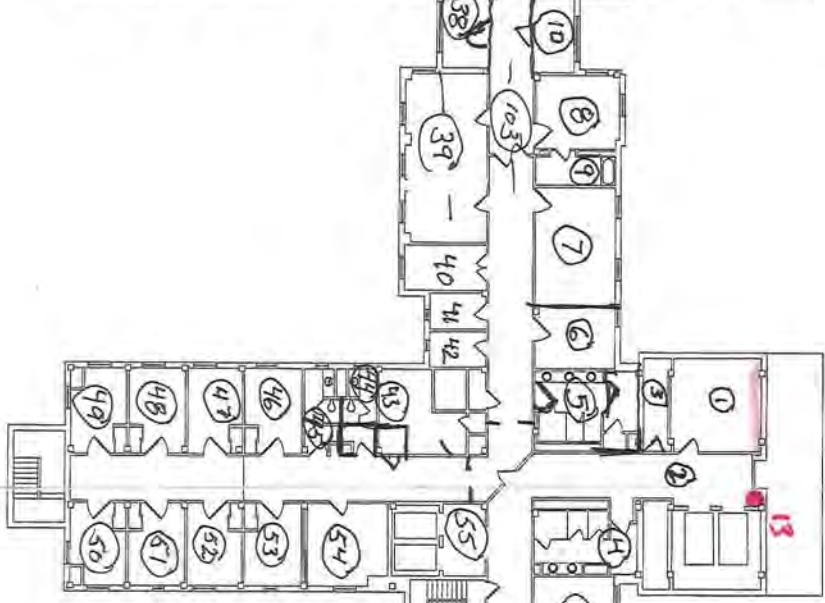
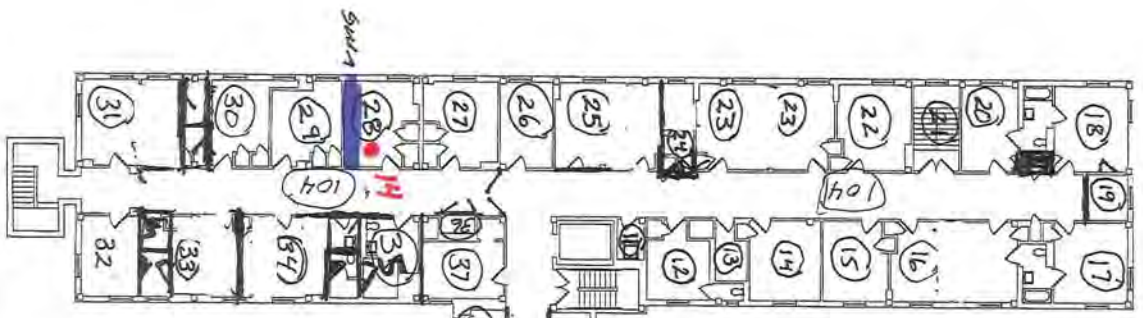
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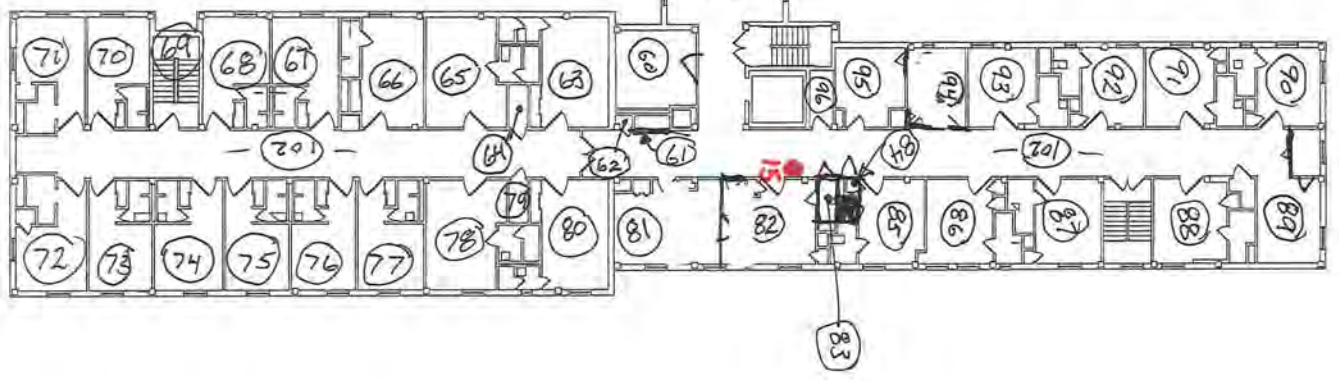




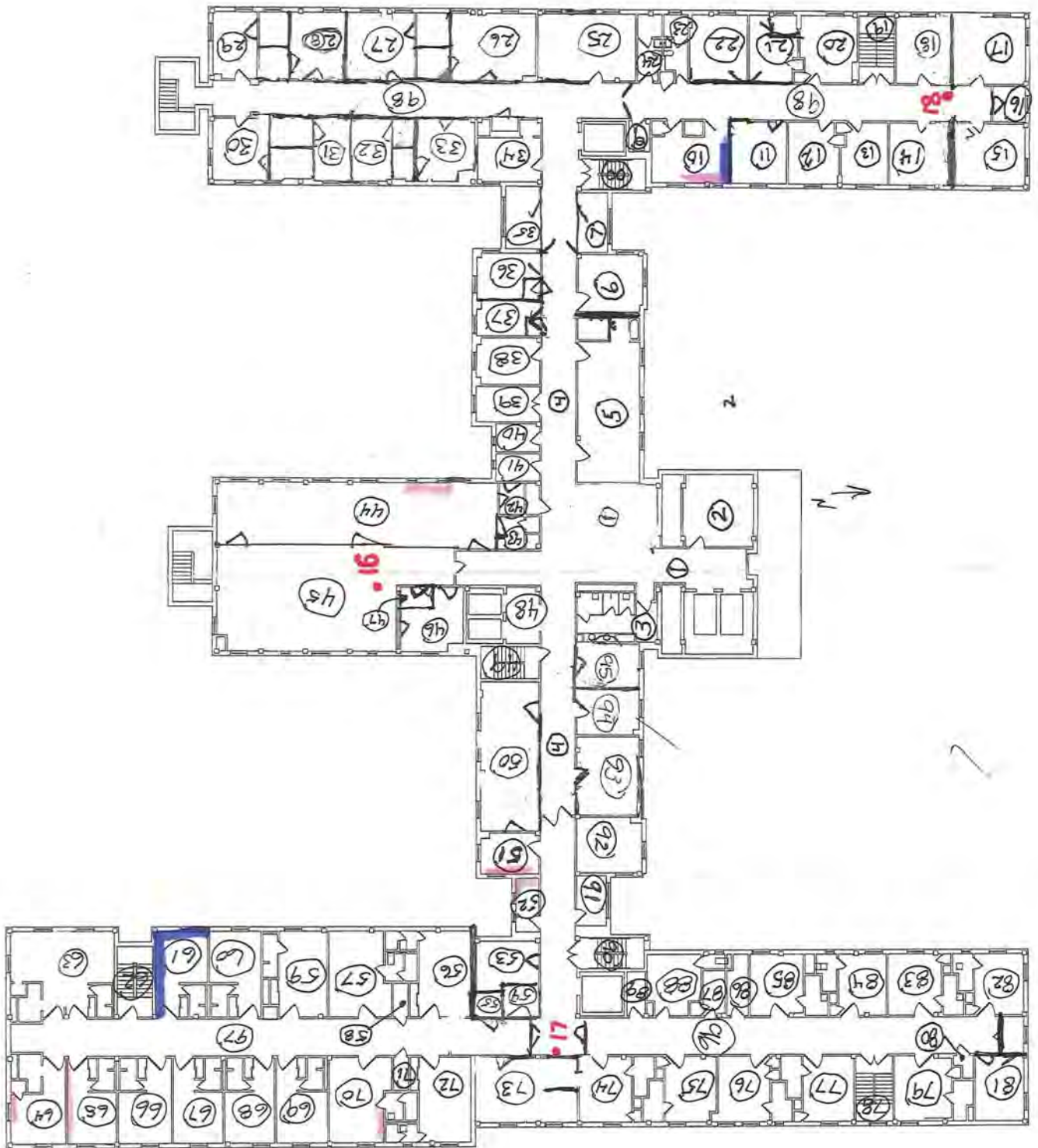
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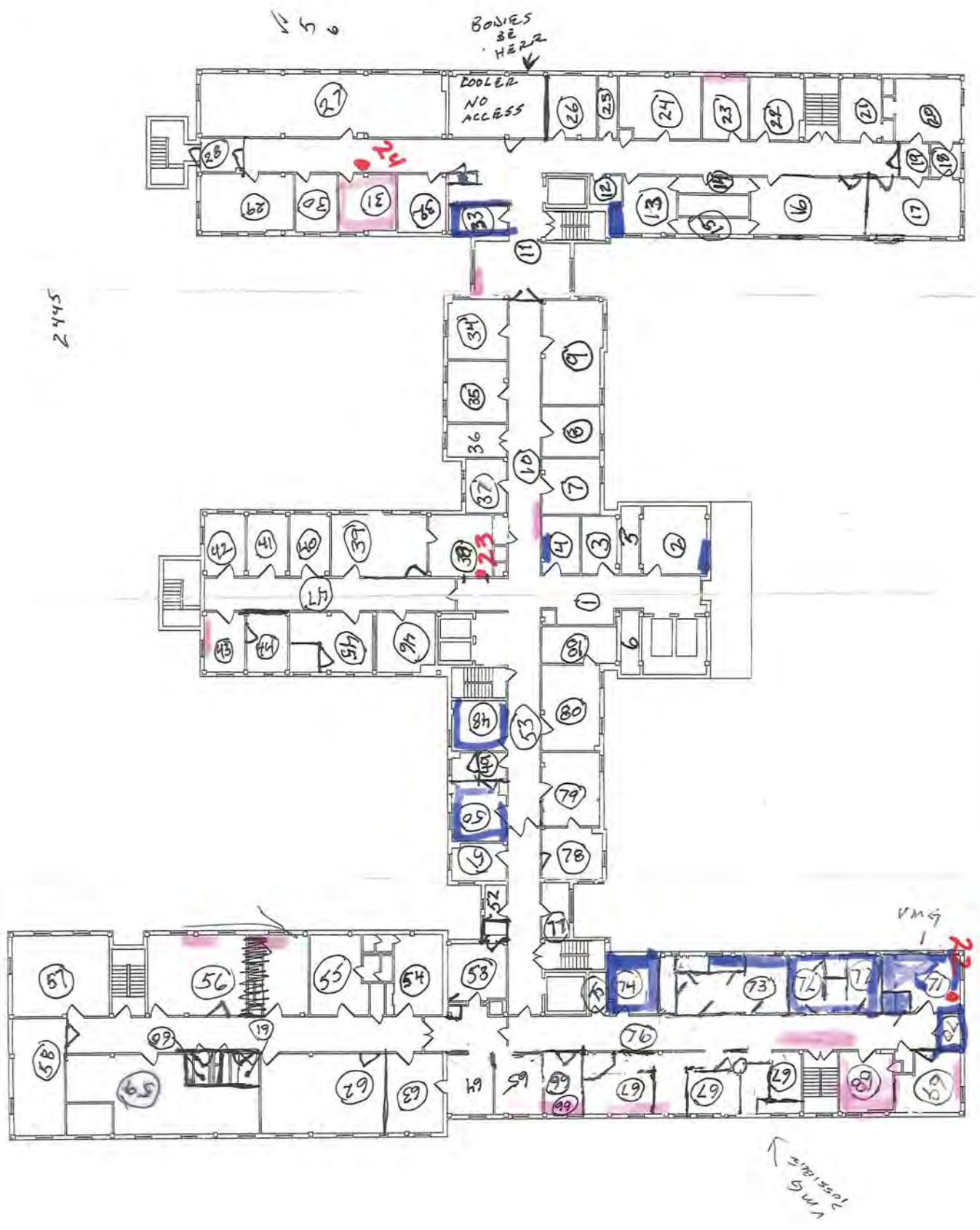


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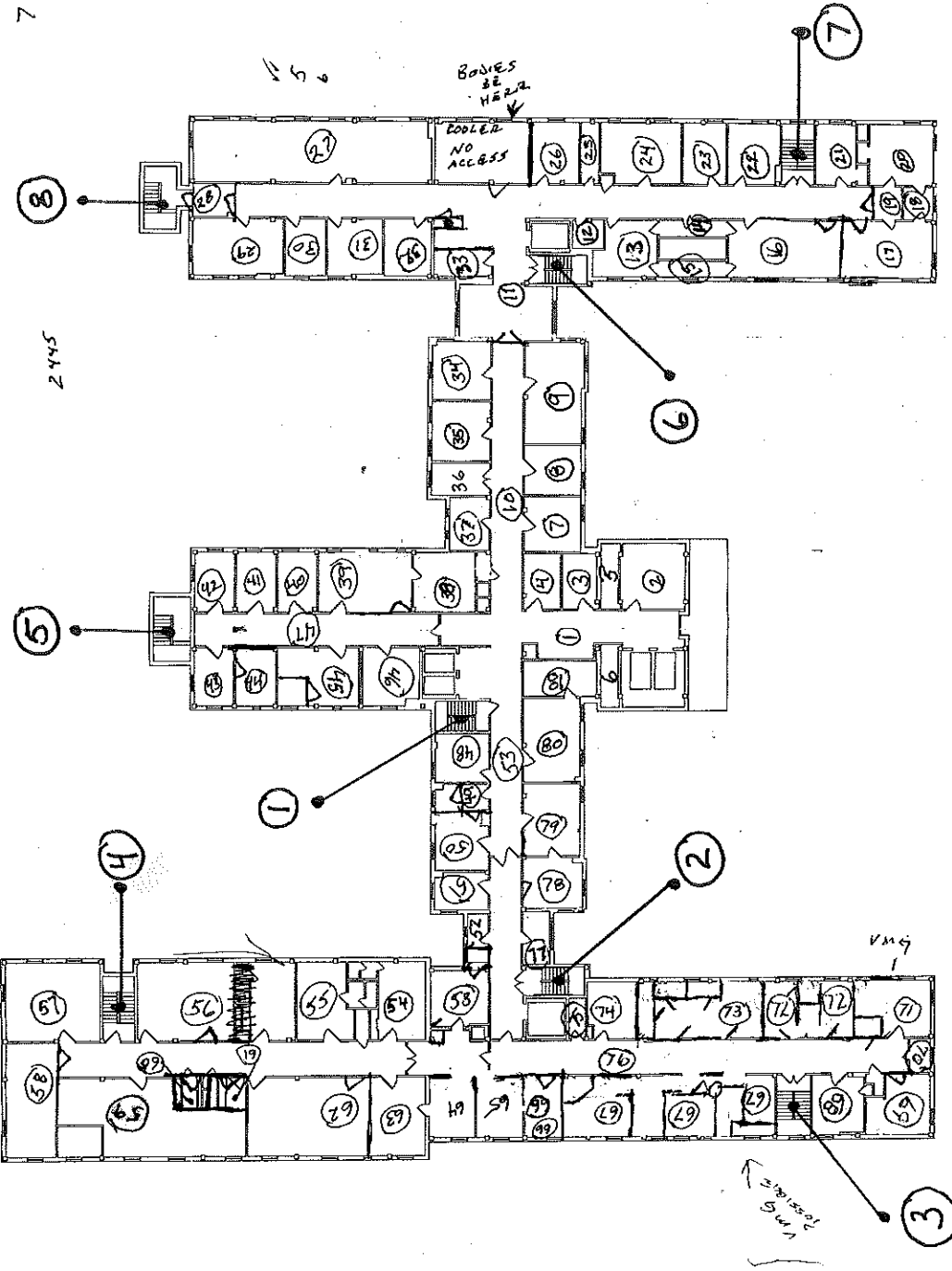




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STAIRWELLS  
(MOW/WID)



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