



January 25, 2023

Mr. Alfredo DiMauro, AssocAIA
Associate Dean of Campus Facilities
Asnuntuck Community College
170 Elm Street, Enfield, CT 06082

Re: Inspection and Testing for Indoor Air Quality - 109 Suite and Classroom 128
Asnuntuck Community College
Atlas/ATC Project No. 4762623001

Dear Mr. DiMauro:

At the request of Asnuntuck Community College facilities personnel (Asnuntuck), Atlas Technical Consultants, LLC (Atlas) has completed the indoor air quality (IAQ) inspection and testing for a reported chemical odor in the 109 Suite and a reported mildew odor in Classroom 128, located at Asnuntuck Community College, 170 Elm Street in Enfield, Connecticut. The purpose of this inspection and testing was to determine the cause/source of the reported odors and evaluate the indoor air quality in the 109 Suite and in Classroom 128. The IAQ inspection and testing for this evaluation was completed on January 19, 2023 by Douglas Rhoads, CHMM of Atlas. The weather at the time of the inspection was clear and approximately 34 degrees Fahrenheit.

109 Suite Inspection and Testing (January 19, 2023)

Atlas was on-site to inspect and test the 109 Suite for the recent reported acetone-like odors, which were reported most prevalent in the entry (open area) of the 109 Suite. High efficiency particulate air (HEPA) filtration units were run during the time of the reported odor, but did not seem to mitigate the issue. No sources/cause of the odor could be determined. The odor was noticed for approximately 1 week and then was not present in the space roughly on January 18, 2023.

No odors were present on January 19, 2023 when Atlas did the inspection and testing. The supply and return vents for the forced air system in the 109 Suite were inspected with no accumulated dust on the diffusers. The plenum above the ceiling tiles did not show any signs of leaks or water intrusions. The return vent in the 109 Suite in the open area was drawing air out of the room. The unit ventilators for the perimeter offices in the 109 Suite were operationally and no leaks were observed for these units. Lysol, "Febreze" (air freshener) and Hand Sanitizer were observed in the 109 Suite space for use.

Atlas tested the Suite (all rooms in the 109 Suite) for comfort parameters: temperature, relative humidity, carbon monoxide (CO), carbon dioxide (CO₂), also for lower explosive limit (LEL), oxygen (O₂), hydrogen sulfide (H₂S) and volatile organic compounds (VOCs). All readings were obtained using real time data instruments, which were calibrated prior to use.

The table below shows the real time data testing results for January 19, 2023 for the 109 Suite.

TABLE 1: 109 Suite (January 19, 2023)

SAMPLE LOCATION	TEMPERATURE Degrees Fahrenheit	RELATIVE HUMIDITY %	CO ₂ ppm	CO ppm	H ₂ S ppm	LEL %	O ₂ %	VOCs ppm
<i>Outside Sample 1</i>	34.0	57.0	424	0.0	0.0	0	20.9	0.1
109 Open	70.7	26.3	520	0.0	0.0	0	20.8	0.0
109A	71.5	24.8	575	0.0	0.0	0	20.8	0.0
109B	72.0	24.0	490	0.0	0.0	0	20.8	0.0
109D	72.1	23.7	468	0.0	0.0	0	20.8	0.0
109C	72.4	23.3	460	0.0	0.0	0	20.8	0.0
109F	73.1	24.0	466	0.0	0.0	0	20.8	0.0
109E	73.2	23.1	479	0.0	0.0	0	20.8	0.0
Acceptable Level Indoors	67-83	30-65	1,024	9	10	10	19.5- 23.5	1

Table 1 Notes:
ppm = parts per million

The comfort parameters in the rooms for the 109 Suite were all within the acceptable ASHRAE guidelines, with the exception of relative humidity, which was below 30%. No levels of LEL were present in the 109 Suite. Oxygen was 20.8% in all the rooms which complies with the OSHA standards. Hydrogen Sulfide was none detected (ND). VOCs were none detected (0.0 parts per million).

No visible signs of a source of the past odor could be found or determined. Chemicals in the 109 Suite were hand sanitizer, “Febreze” and Lysol. These chemicals could contribute to short term odors in the spaces when used.

Based on the inspection and real time data testing by Atlas on 1/19/23, the 109 Suite does not show any levels of concern for the parameters tested. The space can be re-occupied.

Classroom 128 Inspection and Testing (January 19, 2023)

Classroom 128 was reported to have musty/mildew odors. No odors were present in Classroom 128 on January 19, 2023 during Atlas’ inspection. The unit ventilator in the room was running, but the thermostat was not working properly and the room was noticeably cool. The return vent in the room is connected to the adjacent hallway and was observed to be drawing air out of Classroom 128. The inside of the vent was observed to have accumulated dust. Pads were observed at the interior window sill in the room due to recent leaks at the window during rain events.

See Attachment A for the site photographs.

Temperature, Relative Humidity (RH), Carbon Dioxide (CO₂) and Carbon Monoxide (CO) - Table 2

Temperature, RH, CO, and CO₂ readings were obtained using a calibrated Q-Trak Indoor Air Quality Meter (Model 7565). The Q-Trak was factory calibrated prior to use at the Site. The following assessment methods were utilized during the indoor environmental assessment.

Comfort parameters – Temperature and Relative Humidity conditions were monitored inside of the building and compared to the outside conditions. Direct reading samples were measured with a TSI Q-Trak model 7565 Indoor Air Quality Meter.

Carbon Dioxide - Carbon dioxide conditions were monitored inside of the building and compared to the outside conditions. Direct reading samples were measured with a TSI Q-Trak model 7565 Indoor Air Quality Meter.

Carbon Monoxide - Carbon monoxide conditions were monitored inside of the building and compared to the outside conditions. Direct reading samples were measured with a TSI Q-Trak model 7565 Indoor Air Quality Meter.

TABLE 2– Temperature, Relative Humidity, CO and CO₂ Readings - Q-Track Indoor Air Quality Meter – Classroom 128 (1/19/23)

SAMPLE LOCATION December 27, 2021	TEMPERATURE Degrees Fahrenheit	RELATIVE HUMIDITY %	CO₂ ppm	CO ppm
<i>Outside Sample 2</i>	40.4	44.9	416	0.0
Classroom 128	67.4	24.7	495	0.0
Acceptable Level Indoors	67-83	30-65	1,016	9

Table 2 Notes:
ppm = parts per million

Airborne Mold Spore Sample Results – Classroom 128 (January 19, 2023)

Atlas/ATC collected air samples using a portable high flow sampling device using Air-O-Cell cassettes for fungal spores and particulate analysis by Optical Microscopy. Air was drawn into the cassette with the calibrated portable sampling device at 15 liters per minute. The portable sampling device was calibrated prior to collection using the flow indicator cassette. Each sampling point was run for a total time of 5 minutes. Atlas/ATC collected non-culturable bioaerosol samples to evaluate airborne fungal (mold) spore types and concentrations. The non-culturable bioaerosol samples were submitted to EMSL Analytical, Inc., an American Industrial Hygiene Association (AIHA) accredited microbiology laboratory in Meriden, CT, and analyzed microscopically for predominant spore types and concentrations. Table 3 presents spore types, count per cubic meter (C/M³), and total fungi for each sample collected. **A copy of the Laboratory Report for the fungal spores and particulates by Optical Microscopy can be found in Attachment B.**

Table 3: Air-O-Cell Analysis Fungal Spores and Particulates (1/19/23)

Species	Classroom 128 (Sample #01)	Outside Sample 2 (Sample #02)
	Spores/m ³	Spores/m ³
Ascospores	-	200
Basidiospores	80	2,300
Cladosporium	-	200
TOTAL SPORES/m³	80	2,700

Table 3 shows that the total mold (fungi) air sample collected in Classroom 128 is much lower than the outside total mold air sample.

RECOMMENDATIONS

The following recommendations are being made based on the inspection and testing performed for the odor complaints in the 109 Suite and Classroom 128:

- Remove chemicals in the spaces that potentially could contribute to odors.
- Clean the return vent in Classroom 128 with HEPA filtered vacuum equipment and disinfect with an EPA-approved cleaning product.
- Remove the pads at the interior window sill in Classroom 128, which could contribute to musty odors.
- Fix the unit ventilator in Classroom 128 to provide adequate heat into the space.

LIMITATIONS

This report has been prepared to assist Asnuntuck Community College in evaluating the reported odors for the inspected and tested areas on January 19, 2023, located at Asnuntuck Community College, 170 Elm Street in Enfield, CT. Atlas/ATC provided these services consistent with a level of 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 Asnuntuck Community College. 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.

Additionally, the passage of time may result in a change in the environmental characteristics at these sites. This report does not warrant against future operations or conditions that could affect the conclusions made in this report. The results, findings and conclusions expressed in this report are based only on conditions that were observed during Atlas/ATC's site visit. A survey, sampling and analysis of asbestos-containing materials and lead-based paint was not performed by Atlas/ATC for this assessment.

If you have any questions, please do not hesitate to contact me at (860) 549-7495. Thank you for selecting Atlas/ATC to assist you with this important project.

Sincerely,

Atlas Technical Consultants, LLC



Douglas Rhoads, CHMM
Manager of Compliance Services
Direct Line: 860-466-6014
Email: doug.rhoads@oneatlas.com



Michael Matilainen CIH, CSP
Certified Industrial Hygienist
Cell Phone: 413-522-8833
Email: michael.matilainen@oneatlas.com



Attachment A
Site Photographs

**INSPECTION AND TESTING FOR INDOOR AIR QUALITY AND MOLD
ASNUNTUCK COMMUNITY COLLEGE
170 ELM STREET
ENFIELD, CT 06082**



Photo 1: Classroom 128.



Photo 2: Classroom 128 - window leaks (note pads on window sill).



Photo 3: Classroom 128 – return vent connected to adjacent hallway.



Photo 4: Classroom 128 – return vent with accumulated dust.



Attachment B
Laboratory Reports and Chain of Custody



EMSL Analytical, Inc.

165 Gracey Avenue Meriden, CT 06451
Tel/Fax: (203) 284-5948 / (203) 284-5978
<http://www.EMSL.com / wallingfordlab@emsl.com>

EMSL Order: 242300292
Customer ID: ATCE54
Customer PO: 19-10133-0001
Project ID:

Attention: Doug Rhoads
Atlas Technical
290 Roberts Street
Suite 301
East Hartford, CT 06108
Project: ASNUNTUCK CC- ROOM 128

Phone: (860) 549-7495
Fax: (860) 282-9826
Collected Date: 01/19/2023
Received Date: 01/19/2023 01:40 PM
Analyzed Date: 01/23/2023

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	242300292-0001			242300292-0002		
Client Sample ID:	01			02		
Volume (L):	75			75		
Sample Location:	ROOM 128			OUTSIDE SAMPLE		
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-
Ascospores	-	-	-	4	200	7.4
Aspergillus/Penicillium	-	-	-	-	-	-
Basidiospores	2	80	100	56	2300	85.2
Bipolaris++	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-
Cladosporium	-	-	-	5	200	7.4
Curvularia	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-
Rust	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-
Total Fungi	2	80	100	65	2700	100
Hyphal Fragment	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-
Pollen	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.


Gloria V. Oriol-Aguilar, Microbiology Director
or other Approved Signatory

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

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. 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. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. 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. Skin & Fibrous ratings: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-100%) of the background particles.
Samples analyzed by EMSL Analytical, Inc. Meriden, CT AIHA LAP, LLC-EMLAP Accredited #165118

Initial report from: 01/23/2023 11:13 AM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com

Microbiology Chain of Custody

EMSL Order Number (Lab Use Only):

EMSL ANALYTICAL, INC.
4 FAIRFIELD BLVD
WALLINGFORD, CT 06457
PHONE: (203) 284-5948
FAX: (203) 284-5978



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

242300292

Company: Atlas EMSL-Bill to: Same Different
 If Bill to is Different please note in Comments**

Street: 290 Roberts St. Suite 301 Thrd Party Billing requires written authorization from third party

City: East Hartford State/Province: CT Zip/Postal Code: 06108 Country: USA

Report To (Name): Doug Rhoads Fax #: _____

Telephone #: 860-549-7495 E-mail Address: doug.rhoads@emslatlas.com

Project Name/ Number: Asnuntuck PC - Room 128

Please Provide Results: Fax E-mail PO# _____ State Samples Taken: CT

Turnaround Time (TAT) Options* - Please Check

3 Hours 6 Hours 24 Hours 48 Hours 3 Days 4 Days 5 Days 10 Days 2 Weeks

*Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide. TATs are subject to methodology requirements

Non Culturable Air Samples (Spore Traps)

- M001 Air-O-Cell
- M049 BioSIS
- M030 Micro 5
- M173 Allegro M2
- M003 Burkard
- M174 MoldSnap
- M004 Allergenco
- M043 Cyclcx
- M176 Ralle Smart
- M032 Allergenco-D
- M002 Cyclcx-d
- M130 Via-Cell
- M172 Versa Trap

Other Microbiology Test Codes

- M041 Fungal Direct Examination
- M005 Viable Fungi ID and Count
- M006 Viable Fungi ID and Count (Speciation)
- M007 Culturable Fungi
- M008 Culturable Fungi (Speciation)
- M009 Gram Stain Culturable Bacteria
- M010 Bacterial Count and ID - 3 Most Prominent
- M011 Bacterial Count and ID - 5 Most Prominent
- M013 Sewage Contamination in Buildings
- M014 Endotoxin Analysis
- M015 Heterotrophic Plate Count
- M180 Real Time Q-PCR-ERMI-36
- Panel
- M018 Total Coliform (Membrane Filtration)
- M020 Fecal Streptococcus (Membrane Filtration)
- M210-215 Legionella Detection
- M026 Recreational Water Screen
- M027 Mycotoxin Analysis
- M029 Enterococci
- M019 Fecal Coliform
- M133 MRSA Analysis
- M028 Cryptococcus neoformans Detection
- M120 Histoplasma capsulatum Detection
- M033-39 Allergen Testing
- M044 Group Allergen (Cat, Dog, Cockroach, Dustmites)
- Other See Analytical Price Guide

Preservation Method (Water): N/A

Name of Sampler: Doug Rhoads

Signature of Sampler: [Signature]

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
01	Room 128	Air	M001	75L	1-19-22/8:10AM
02	outside sample	Air	M001	75L	1-19-22/9:00AM

Client Sample # (s): 01, 02 Total # of Samples: 2

Relinquished (Client): [Signature] Date: 1/19/23

Received (Client): _____ Date: _____

Comments: _____

RECEIVED

JAN 19 2023

By: [Signature] 13:40 WJ