INDOOR AIR QUALITY ASSESSMENT

ACPS TRANSPORTATION FACILITY

3540 WHEELER AVENUE
ALEXANDRIA, VIRGINIA 22304

ECS PROJECT NO. 47:11652-Z

FOR: ALEXANDRIA CITY PUBLIC SCHOOLS

OCTOBER 6, 2025

October 6, 2025

Mr. Lee Conroy
Alexandria City Public Schools
2000 North Beauregard Street
Alexandria, Virginia 22311
lee.conroy@acps.k12.va.us

ECS Project No. 47:11652-Z

Reference: Indoor Air Quality Assessment, ACPS Transportation Facility, 3540 Wheeler Avenue, Alexandria, Virginia

Dear Mr. Conroy:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools with the results of the Indoor Air Quality Assessment performed at the ACPS Transportation Facility located at 3540 Wheeler Avenue in Alexandria, Virginia. This report summarizes our observations, analytical results, findings, and recommendations related to the work performed. The work described in this report was performed by ECS in general accordance with the Scope of Services described in ECS Proposal Number 47:41199 and the terms and conditions of the agreement authorizing those services.

ECS appreciates this opportunity to provide Alexandria City Public Schools with our services. If we can be of further assistance to you, please do not hesitate to contact us.

Sincerely,

ECS Mid-Atlantic, LLC

William T. Sargent
Assistant Staff Project Manager
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1.0 PROJECT DESCRIPTION

The ACPS Transportation Facility is located at 3540 Wheeler Avenue in Alexandria, Virginia. This is a mixed use garage and office building that is currently being used by Alexandria City Public Schools to service its cars and schoolbuses. The subject building was constructed sometime in the 1970s. ECS understands that building occupants have reported concerns of poor indoor air quality and symptoms of related illness, such as asthma, headaches, and difficulty breathing. One occupant was stated to have several asthma attacks.

Alexandria City Public Schools has requested ECS to conduct a Indoor Air Quality Assessment to evaluate these concerns.

2.0 PURPOSE

The purpose of the Indoor Air Quality Assessment was to identify potential causes of these symptoms and complaints. These investigations included visual observations and sampling for mold and moisture, as well as selected air quality parameters including carbon dioxide (CO2), carbon monoxide (CO), temperature, and relative humidity within surveyed areas of the building.

3.0 METHODOLOGY

ECS performed the authorized Scope of Services in general accordance with our proposal, standard industry practice(s) and methods specified by guidelines and industry standards for the identification of mold and moisture-affected building materials.

3.1 Mold and Moisture

The assessment included a non-invasive visual and olfactory survey for evidence of mold and moisture within the subject property. The assessments focused on the client-selected area indicated by Alexandria City Public Schools. The ECS site personnel observed readily accessible areas and selected building materials to evaluate visible suspect fungal growth and/or moisture-impacted materials. A reasonable effort was made to identify water and mold-impacted areas; however, this does not imply a guarantee that all possible reservoirs of mold were identified because mold or water-impacted building materials may be hidden by walls, flooring, partitions, etc.

Ambient temperature, relative humidity, and dewpoint temperature were measured during the survey using a thermo-hygrometer. The purpose of these measurements was to identify elevated interior humidity levels, which could potentially support indoor mold growth or indicate ongoing moisture problems.

Carbon Dioxide (CO2) and Carbon Monoxide (CO) levels were recorded using a TSI Q-Trak Air Quality Monitor. CO2 and CO were measured to find evidence of gas leaks, or otherwise stagnant air in which proper air exchange was not occurring.

ECS conducted a screening of selected areas using an infrared (IR) thermal imaging camera to assess thermal characteristics of building materials that may indicate potential moisture intrusion concerns. Suspected moisture-affected areas identified by the IR screening were subsequently tested using a moisture meter.

Selected potentially moisture-affected materials were measured using a Delmhorst Model BD 2100 moisture meter to evaluate moisture content. This was not a comprehensive moisture mapping survey of all building materials within the areas surveyed but rather a non-invasive survey of moisture in select areas of specific building materials which may be impacted by moisture.

Fungal spore air samples were collected by means of a high volume pump and Air-O-Cell® cassettes. Samples were transported to Scientific Analytical Institute located in Greensboro, NC for analysis. Scientific Analytical Institute is accredited by the Environmental Microbiology Laboratory Accreditation Program, administered by the American Industrial Hygiene Association. Air samples were reported to the genus or group level according to the laboratory standard quantification procedures.

Surface samples for fungal spores were collected using sterile pre-packaged/pre-moistened swabs used to sample a suspect surface or material. Surface sampling is a semi-quantitative test and is only indicative of the conditions at the location sampled. Surface samples are primarily meant to identify the presence and type of mold spores on the sampled surfaces.

It is important to note that fungal spore samples represent a snapshot in time of a constantly changing microbiome. Environmental conditions such as temperature and humidity may influence sample results. The goal of the sampling performed was not to establish precise numerical concentrations over time, but rather to generally identify the dominant fungi in the sampled locations and the general significance of their relative concentrations as compared to outdoor concentrations or unaffected locations.

4.0 RESULTS

The following is a summary of laboratory results, measurements, findings and observations.

4.1 Mold and Moisture

On September 25, 2025, ECS inspector William Sargent performed an IAQ assessment. Below are observations made on that date:

- Several occupants were interviewed during the assessment. The occupants interviewed explained that the break room (otherwise known as the lounge) was known for making people feel ill. One occupant, who had been the one to suffer from asthma, had moved to the east office across the hall from the break room office due to the adverse symptoms she reported that she has experienced.
- In addition, ECS interviewed the facility director, who had stated that water would frequently leak from the ceiling during heavy rain events. Furthermore, issues with the subgrade waterproofing would cause water intrusion in the lower-level office spaces.
- A total of four surface swabs were collected and analyzed for mold spore content. Three of the four swabs collected indicated the presence of mold growth (all 3 of which were on the break room ceiling tiles).
- Infra-red camera screening did not indicate elevated moisture in the walls or flooring. Porous walls were not observed to have elevated moisture in the office areas and other sections of the building.

- A total of eleven (11) mold air samples were taken throughout the subject building. Overall, slightly elevated spore counts were observed in the Break Room, Break Room Office, and some ground level offices and hallway.
- Elevated moisture readings, using a moisture meter, were detected on the carpets which indicated a lack of drying after leaks happened. These elevated moisture levels were taken on stained areas of the carpets on the upper level. Drywall and concrete in the space were not observed to have high levels of moisture.

Below is a summary of the sampling data collected as part of this evaluation.

4.1.1 Spore-Trap Air Samples

Fungal spore-trap air samples were collected from inside the transportation facility building. Representative exterior samples were collected for comparison. The following table summarizes the results of sample analysis reported in spore counts per cubic meter of air.

Spore-Trap Sample Results

Sample Number	Sample Location	Total Fungal Spore Concentration (count/cubic meter)
OUT01	Parking Lot	>49,900
OUT02	Parking Lot	>49,100
01	Break Room Office	2,270
02	Break Room	4,150
03	Main Office	1,020
04	Directors Office	862
05	Ground Level Main Area	5,250
06	Ground Level Front Office	4,310
07	Ground Level Back Office	4,230
08	Ground Level Corner Office	1,250
09	Entrance Hallway	2,190

The laboratory results indicated that total indoor fungal spore concentrations were less than the concentrations identified outdoors, although some rooms had elevated spore counts when compared to other rooms. The spore types identified indoors were generally consistent with the outdoor spore types, although some spores types identified inside were not identified outside. These results suggest that the source of the majority of indoor fungal spores reported was likely outdoors, although indoor reservoirs of mold appear to be present in small quantities in these rooms, as observed/noted in the break room.

There are currently no accepted regulatory standards or guidelines with respect to acceptable fungal levels inside buildings. It is important to note however that spore trap measurements can fluctuate rapidly and the readings reported should not be used as a definitive indication that mold and or health hazards related to mold are present or absent.

4.1.2 Direct Surface Fungi Samples

Surface swab samples were collected from the break room and neighboring break room office ceiling tiles. Sample locations were selected from areas suspected to have fungal spore concentrations present due to water staining on building materials, visible mold growth, or other observations made by ECS indicative of possible fungal spore growth. The following table summarizes the results of sample analysis. The laboratory reports the results in accordance with the following density rating:

- 1=Trace (1-10 Spores);
- 2=Light (11-100 spores);
- 3=Abundant (101-300);
- 4=Loaded (>300 spores)

Direct Surface Fungi Samples

Sample Number	Sample Location	Type and Density Rating
01	Break Room Ceiling Tile	**Cladosporium - 1**
02	Break Room Ceiling Tile Near Sink	**Alternaria - 4** **Cladosporium - 2** **Drechslera/Bipolaris - 1**
03	Break Room Ceiling	**Alternaria - 2** **Aspergillus/ Penicillium-like - 2** **Cladosporium - 2** **Stachybotrys - 4**
04	Break Room Office Ceiling Tile	None

Based on the above results, mold growth on the ceiling tiles in the break room is apparent. This was observed to be due to the water dripping onto selected areas on the ceiling tiles, creating the ideal conditions for mold growth. This was not observed in the neighboring office, although this does not rule out mold growth in this area completely.

There are currently no accepted regulatory standards or guidelines with respect to acceptable fungal levels inside buildings. Surface samples are generally qualitative in that they reflect the type and quantity of mold present only at the sampled location at the time the sample was collected.

4.1.3 Carbon Dioxide and Carbon Monoxide

ECS walked through the space and collected CO and CO2 readings.

Carbon monoxide is a colorless, odorless gas that may cause mild effects at lower levels that are often mistaken for the flu, including headaches and nausea. At high levels, CO gas can be lethal. It is found indoors as a result of combustion devices not properly vented to the outdoors, such as engines, natural gas appliances, furnaces, and wood stoves or fireplaces. The US Environmental Protection Agency (EPA) National Ambient Air Quality Standard (NAAQS) for CO is 9 ppm as an eight hour average. ASHRAE has adopted this level as a standard for indoor air quality, not to be exceeded at any time. The OSHA permissible exposure limit (PEL) for carbon monoxide is 50 ppm as an eight hour TWA. Concentrations exceeding 1,200 ppm are immediately dangerous to life and health.

Carbon dioxide (CO_2) is a common compound emitted from human respiration and combustion sources. Elevated levels within a building typically indicate inadequate ventilation or lack of proper outdoor air exchange rates. When elevated carbon dioxide levels occur within the building environment, while not an immediate health hazard, these conditions may be indicative of the buildup of a variety of indoor contaminants that can cause discomfort in some individuals. The OSHA Technical Manual for IAQ assessments references a NIOSH report that states that levels greater than 1,000 parts per million (ppm) indicate inadequate ventilation rates. While the elevated CO_2 levels do not necessarily indicate harmful conditions, CO_2 levels below 1,000 ppm promote conditions that maximize comfort for most occupants. For reference purposes, the OSHA Permissible Exposure Limit (PEL) for CO_2 is 5,000 ppm as an eight hour time-weighted average (TWA).

The following table summarizes the carbon monoxide, and carbon dioxide readings collected by ECS during this assessment.

Location	Time	CO2 - Carbon Dioxide (ppm)	CO - Carbon Monoxide (ppm)
Break Room Office	9:45 AM	1802	1.7
Break Room	10:05 AM	1420	1.6
Main Office	10:26 AM	1140	1.4
Directors Office	10:32 AM	1130	1.4
Ground Level Main Area	10:42 AM	1000	1.5
Ground Level Front Office	10:52 AM	1274	1.7
Ground level Back Office	10:58 AM	1207	1.6
Ground Level Corner Office	11:04 AM	1165	1.8
Entrance Hallway	11:11 AM	1120	1.7

Overall, CO levels were within the acceptable levels set by OSHA and US EPA for occupied indoor spaces. Carbon Dioxide levels were relatively high due to an apparent lack of outdoor air / poor air flow throughout the building, especially in the break room. Spaces in the subject building observed/ surveyed by ECS were occupied at the time of measuring. When inadequate fresh outdoor air is provided in an occupied building, concentrations of CO2

will increase along with the concentration of other indoor contaminants and human bioeffluents. This is believed to play a factor in the reported indoor air quality complaints as it relates to the increased CO2 levels reported.

4.1.4 Temperature, Humidity, and Dew Point

The key to understanding humidity is that warmer air can contain greater quantities of moisture than cooler air. Relative humidity is defined as the ratio of the amount of moisture contained in the air to the maximum amount of moisture the air can contain at that temperature. The dew point temperature is defined as the temperature at which the amount of moisture in the air reaches saturation. The dew point is a more accurate indication of the actual amount of moisture in the air because it is independent of temperature.

The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) has published several standards for ventilated buildings. *ANSI/ASHRAE Standard 62.1-2022, Ventilation for Acceptable Air Quality,* specifies that indoor humidity should be maintained below 60 degrees Fahrenheit (°F) dew point temperature. The EPA recommends that indoor relative humidity be maintained below 60%, ideally 30-50%, to prevent mold growth. The *OSHA Technical Manual,* Section III, Chapter 2 for Indoor Air Quality Investigations specifies a thermal comfort range of 68°F to 76°F and a relative humidity range of 20% to 60% to maximize comfort for all occupants.

The following table summarizes the indoor air temperature and relative humidity readings collected by ECS during the survey.

Temperature and Relative Humidity

Location	Temperature (°F)	Relative Humidity (%)
Parking Lot	74.6	99
Break Room Office	75.7	49.1
Break Room	73.2	51.8
Main Office	74.6	73.8
Directors Office	76.2	69.0
Ground Level Main Area	77.5	76.6
Ground Level Front Office	82.7	72.1
Ground Level Back Office	80.7	69.2
Ground Level Corner Office	80.9	68.1
Entrance Hallway	77.9	57.5
Parking Lot	76.4	89.8

In general, the temperature in most of the areas tested in the building was at or above the ANSI/ ASHRAE acceptable ranges for occupant comfort. In addition, relative humidity readings collected in many of the interior areas surveyed were also significantly elevated above the ANSI/ASHRAE, EPA, and OSHA acceptable ranges for interior relative humidity. ECS believes that elevated relative humidity levels in the building interiors may be a contributing factor for mold growth and indoor air problems being reported.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on our understanding of the purpose of the Indoor Air Quality Assessment, the results of laboratory analysis, and our findings and observations, ECS presents the following recommendations.

Carpeting

During this survey, ECS observed that the carpet was still damp in many of the areas tested, mostly in spots that had obvious water staining. This was likely due to inadequate drying of the carpet (from roof leaks) and poor air movement in the space. Removal of the carpet, and subsequent replacement with a non-porous material, would eliminate the floor as a future source of potential IAQ issues. Carpeting (if not regularly cleaned and maintained) can act as a reservoir of dust and mold particles, triggering allergies and asthma. If the option is to try and keep the carpet, ECS recommends professionally cleaning and drying the carpet. If the carpet is to be kept, it is recommended that the school monitor the condition of the carpet in the future to verify that it is dry after wetting events such as cleaning or leaks. Sources of these leaks should also be addressed as soon as reasonably possible, including repair and correction of any roof leaks.

Mold and Moisture

In general, air sample results did not indicate significant elevations in fungal spore counts. However, several rooms had slightly elevated levels of mold spores. In addition, mold growth was detected on three of the four swab samples collected from the break room ceiling tiles. This mold is likely a result of high levels of condensation on the air handling units and pipes above the ceiling tiles after rain events, causing water to drip down onto ceiling tiles. ECS recommends ceiling tiles in the lounge, as well as any ceiling tile with obvious water damage, to be replaced.

RH levels were also elevated throughout most of the building. ECS recommends that response measures be taken to lower and maintain relative humidity throughout the subject areas to below 60% on a continuous basis to reduce the potential for mold growth. Immediate response actions may include the deployment of dehumidifying machines as a temporary measure until a permanent fix is implemented. It should be noted that once the cooling season is over (and the building is being heated) RH levels will naturally drop.

Carbon Dioxide and Carbon Monoxide

Based on interpretations from ASHRAE OSHA and NIOSH, poor outdoor air ventilation would most likely be attributable to or the likely cause of the elevated CO_2 readings reported in the building, including the indication that outdoor air ventilation rate is less then 5 cfm per person. Although elevations in CO_2 cannot be linked to any direct health concern (at the levels reported), elevations in CO_2 concentrations can be used as an indicator of occupant odors (odorous

bioeffluents) and by inference other building related pollutants including volatile organic compounds (VOCs) which would be more likely to occur in this building environment and which would be expected to negatively impact building indoor air quality. Provision of adequate fresh outside air is a key element in maintaining good indoor quality in the building. As good practice it is recommended that the school look at ways to increase overall air circulation and increase outdoor air ventilation to the complaint spaces. Consultation with a mechanical engineer or contractor is recommended.

General

Because of the nature of the environment, complete elimination of all microbial organisms within a building cannot be expected and is not the goal of remediation. The goal of remediation is to restore the affected materials to at least the condition of unaffected materials. It is important to note that the reported mold levels are only reflective of conditions at the time of the test. Mold populations can vary over time, depending upon a number of conditions, including environmental factors (i.e., temperature and relative humidity). If significant mold growth reappears, or if the occupants experience prolonged allergic-type health complaints, they should seek further investigation of the problem.

ECS was not requested to assess the potential presence of hazardous materials, and ECS assumes no responsibility for actions taken to address mold or moisture that inadvertently disturb hazardous materials. ECS is unaware of the presence of possible asbestos containing materials or lead based paint (LBP). Prior to remediation work, if not performed already, an asbestos/LBP survey is recommended for the building. Pending the results of this survey, disclosures and/or abatement should be made with regards to hazardous containing materials prior to mold/water damage material removal efforts.

Note: The purpose of this survey was to evaluate areas where moisture intrusion or suspected visible mold growth has occurred and provide findings and recommendations for corrective action. Positive identification of sources of moisture and specific recommendations for correction of sources of moisture should be performed by a qualified engineer.

6.0 LIMITATIONS

The conclusions and recommendations presented within this report are based upon a reasonable level of assessment within normal bounds and standards of professional practice for a site in this particular geographic setting. ECS is not responsible or liable for the discovery and elimination of hazards that may potentially cause damage, accidents, or injuries.

This survey is not intended to represent an exhaustive research of every potential hazard or condition that may exist, nor does it claim to represent indoor conditions or events that arise after the survey. This report has been prepared in accordance with generally accepted environmental practices. Our conclusions and findings are based, in part, upon information provided to us by others and our site observations. We have not verified the completeness or accuracy of the information provided by others. The scope of services performed was limited to those requested by the Client and does not

constitute a full microbial assessment of the site or a comprehensive moisture survey of the site. The data provided in this study is only indicative of conditions sampled at the immediate time of the study.

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. Because of the nature of this type of work and the difficulties involved in conducting remediation work, ECS cannot guarantee that the methods or recommendations described in this report will eliminate all potential indoor air quality issues. Since performance of the remediation work is also beyond ECS scope of services, ECS also cannot be held responsible for the execution of the remediation work. 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). 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.

The observations, conclusions, and recommendations pertaining to environmental conditions at the subject site are necessarily limited to conditions observed, and/or materials reviewed at the time this study was undertaken. No warranty, expressed or implied, is made with regard to the conclusions and recommendations presented within this report. This report is provided for the exclusive use of the client. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties without the written consent of ECS and the client.

Our recommendations are in part based on federal, state, and local regulations and guidelines. ECS does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies, any conditions at the site that may present a potential danger to public health, safety, or the environment. Under this scope of services, ECS assumes no responsibility regarding any response actions initiated as a result of these findings. General compliance with regulations and response actions are the sole responsibility of the Client and should be conducted in accordance with local, state, and/or federal requirements.

Appendix I: Site Photographs



1 - Break Room Office



2 - Plenum above Break Room Office



3 - Sample taken in Break Room



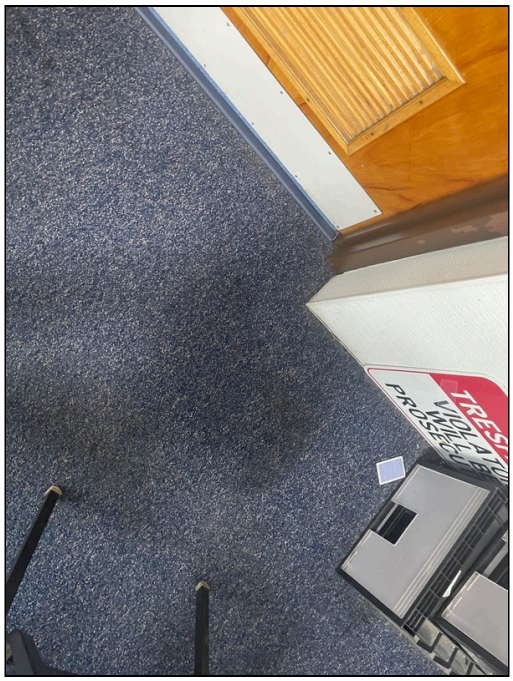
4 - Dust accumulation in Break Room on cove base and carpeting



5 - Visible mold growth on ceiling tiles in Break Room



6 - Elevated moisture readings in the Break Room carpet



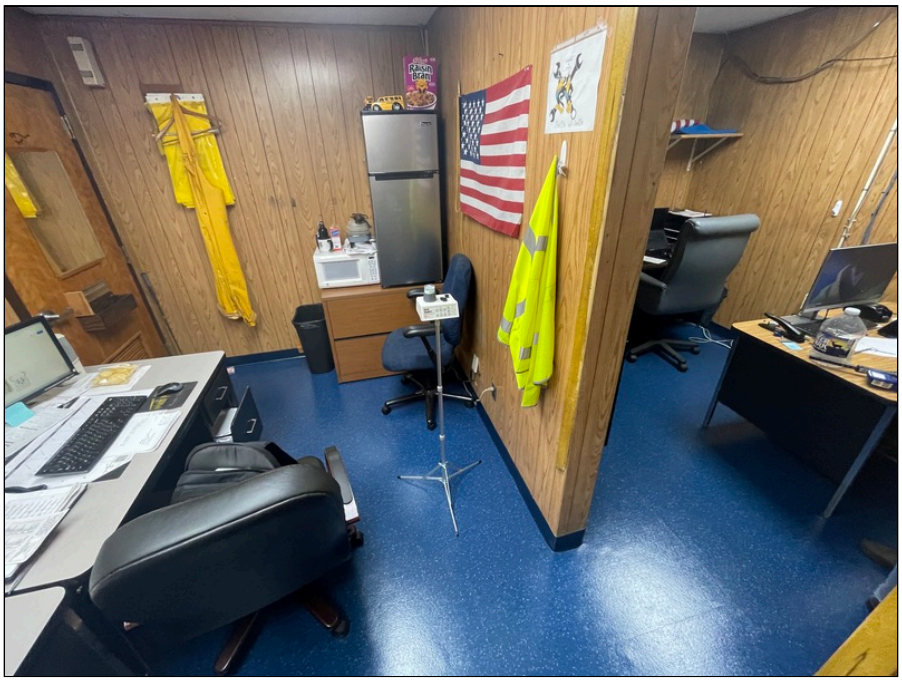
7 - Spots of water below leaks in Break Room



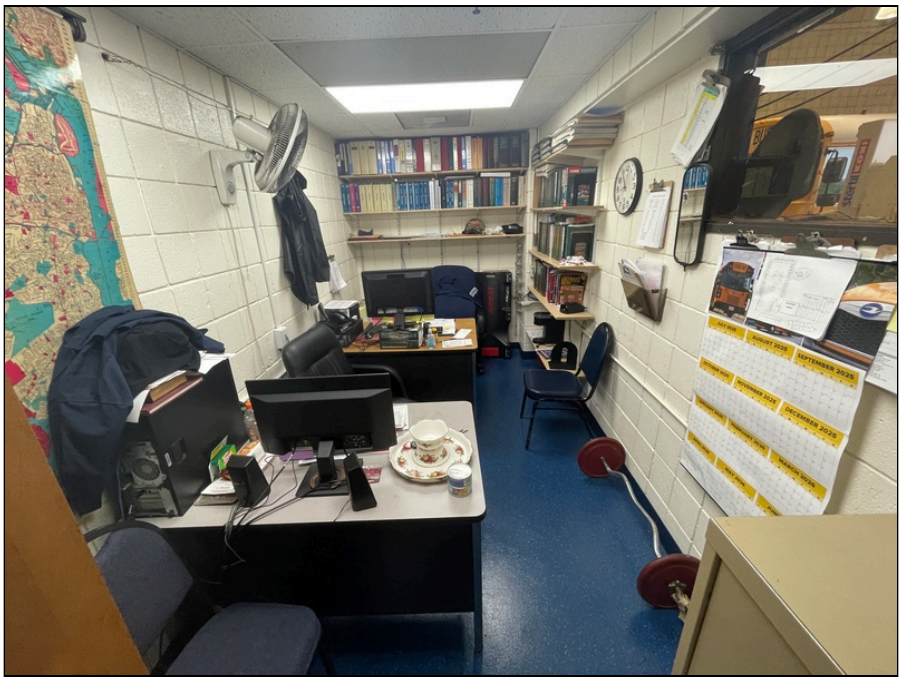
8 - Condensation above ceiling tile in Break Room



9 - More mold growth found on Break Room ceiling tiles



10 - Sample taken in Basement Center Offices



11 - Sample taken in Basement Rear Office

Appendix II: Laboratory Report(s)

Direct Exam: Swab Analysis

SAI Method B-SOP-005

Customer: ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Chantilly, VA 20151

Attn: William Sargent

Project: ACPS Transportation Facility IAQ Assessment

Lab Order ID: **10093048**
Analysis: DES
Date Received: 09/26/2025
Date Reported: 09/26/2025

Sample ID	S01	S02	S03	S04				
Lab Sample ID	10093048_0001	10093048_0002	10093048_0003	10093048_0004				
Description	Break Room Ceili	Break Room Ceili	Break Room Ceili	Break Room Offic				
Lab Notes								
IDENTIFICATION								
Alternaria		4	2	**No Spores Detected**				
Aspergillus/Penicillium-like			2					
Cladosporium	1	2	2					
Drechslera/Bipolaris		1						
Stachybotrys			4					
Fruiting Bodies		1	4					
Hyphal Fragments		3	4					
Pollen								
Debris	3	3	2	3				

Disclaimer: This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. Unless otherwise noted blank sample correction was not performed on analytical results. Scientific Analytical Institute participates in the AIHA EMPAT program for fungi. EMPAT Laboratory ID: 173190. Reporting Limit equals Analytical Sensitivity. Analytical Sensitivity equals 1 spore or structure.

LEGEND: 1=Trace (1-10 Spores); 2=Light (11-100 spores); 3=Abundant (101-300); 4=Loaded (>300 spores)

Darrin Parrick (4)
Analyst

Approved Signatory

Scientific Analytical Institute, Inc. 4604 Dundas Dr. Greensboro, NC 27407 (336) 292-3888

Scientific Analytical Institute
4604 Dundas Dr. Greensboro, NC 27407
Phone: 336.292.3888 Fax: 336.292.3313
www.sailab.com lab@sailab.com

Lab Use Only
Lab Order ID: 10093048
Client Code: _____

Company Contact Information

Company: ECS Mid-Atlantic LLC	Contact: William Sargent
Address: 14026 Thunderbolt Place Suite 100	Phone ☐: 202-570-0898
Chantilly, VA 20151	Fax ☐:
	Email ☐: wsargent@ecslimited.com

Billing/Invoice Information

Company:	
Contact:	
Address:	

Turn Around Times

90 Min. ☐	48 Hours ☐
3 Hours ☐	72 Hours ☐
6 Hours ■	96 Hours ☐
12 Hours ☐	120 Hours ☐
24 Hours ☐	144+Hours ☐

PO Number: 47:11652-Z:84

Project Name/Number: ACPS Transportation Facility IAQ Assessment

Microbiology Test Types

Spore Trap - Slit Impact, ie, AOC/Allergenco (STA)	■
Spore Trap Other, ie. Micro-5 (STO)	☐
Direct Exam Tape (DET)	☐
Direct Exam Swab (DES)	■
Direct Exam Bulk (DEB)	☐
Fungal Culture Air (FCA)	☐
Fungal Culture Swab (FCS)	☐
Fungal Culture Bulk (FCB)	☐
Bacteria Culture Air (BCA)	☐
Bacteria Culture Bulk (BCB)	☐
Bacteria Culture Swab (BCS)	☐
Biolog (BLG)	☐
Drinking Water (BCC) (Coliform/E.coli)	☐
Other:	☐

Sample ID #	Description/Location	Volume/Area	Comments
OUT01	Parking Lot	75	STA
A01	Break Room Office	75	STA
A02	Break Room	75	STA
A03	Main Office	75	STA
A04	Directors Office	75	STA
A05	Ground Level Main Area	75	STA
A06	Ground Level Front Office	75	STA
A07	Ground Level Back Office	75	STA
A08	Ground Level Corner Office	75	STA
A09	Entrance Hallway	75	STA
S01	Break Room Ceiling Tile	75	DES
S02	Break Room Ceiling Tile Near Sink		DES
S03	Break Room Ceiling Tile Near Fridge		DES
S04	Break Room Office		DES
OUT02	Parking Lot	75	STA

Total # of Samples 15

Relinquished by	Date/Time	Received by	Date/Time
William Sargent			9/26
	9.25.25/5:00PM		1030

Accepted ☐

Rejected ☐

Direct Exam: Spore Trap Analysis

SAI Method B-SOP-003

Customer: ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Chantilly, VA 20151

Attn: William Sargent

Project: ACPS Transportation Facility IAQ Assessment

Lab Order ID: **10093050**
Analysis: STA
Date Received: 09/26/2025
Date Reported: 09/26/2025

Sample ID	OUT01			A01			A02			**EXTERIOR**		
Lab Sample ID	10093050_0001			10093050_0002			10093050_0003			**AVERAGE**		
Description	Parking Lot			Break Room Office			Break Room			**N/A**		
Lab Notes										**N/A**		
Volume (L)	75			75			75			**N/A**		
Analytical Sensitivity (counts/m³)	78			78			78			**N/A**		
IDENTIFICATION	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**
Alternaria	1	78.4	0.157%							<1	39.2	N/A
Ascospores	>300	>23500	47.1%**	12	940.	41.4%	19	1490	35.8%	>300	>23500	47.5%**
Aspergillus/Penicillium-like	6	470.	0.942%				3	235	5.66%	7	549	1.11%
Basidiospores	>300	>23500	47.1%**	5	392	17.2%	15	1180	28.3%	>300	>23500	47.5%**
Cercospora-like	1	78.4	0.157%							1	78.4	0.158%
Cladosporium	19	1490	2.98%	2	157	6.9%	11	862	20.8%	16	1220	2.53%
Curvularia				3	235	10.3%						
Drechslera/Bipolaris							1	78.4	1.89%			
Epicoccum				1	78.4	3.45%				<1	39.2	N/A
Myxomycete/Rust/Smut-like	1	78.4	0.157%	5	392	17.2%	2	157	3.77%	1	78.4	0.158%
Nigrospora												
Pithomyces	3	235	0.471%	1	78.4	3.45%				2	118	0.316%
Pyricularia												
Stachybotrys							2	157	3.77%			
Unknown/Other	6	470.	0.942%							5	392	0.791%
TOTAL	**>637**	**>49900**	**100.%**	**29**	**2270**	**100.%**	**53**	**4150**	**100.%**	**>632**	**>49500**	**100.%**
Non-Cellulosic Fibers	-	-	-	-	-	-	-	-	-	-	-	-
Hyphal Fragments	2	157	-	1	78.4	-	5	392	-	2	117.7	-
Insect Parts	-	-	-	-	-	-	-	-	-	-	-	-
Pollen	1	78.4	-	-	-	-	-	-	-	1	78.4	-
Skin Cell % of Total Debris		**0-20%**			**40-60%**			**40-60%**			**N/A**	
Total Debris in Background		**40-60%**			**60-80%**			**60-80%**			**N/A**	

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**High spore concentrations denote an approximate percentage of total amount.

Darrin Parrick (12)
Analyst

Approved Signatory

Direct Exam: Spore Trap Analysis

SAI Method B-SOP-003

Customer: ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Chantilly, VA 20151

Attn: William Sargent

Project: ACPS Transportation Facility IAQ Assessment

Lab Order ID: **10093050**
Analysis: STA
Date Received: 09/26/2025
Date Reported: 09/26/2025

Sample ID	A03			A04			A05			**EXTERIOR**		
Lab Sample ID	10093050_0004			10093050_0005			10093050_0006			**AVERAGE**		
Description	Main Office			Directors Office			Ground Level Main Area			**N/A**		
Lab Notes										**N/A**		
Volume (L)	75			75			75			**N/A**		
Analytical Sensitivity (counts/m³)	78			78			78			**N/A**		
IDENTIFICATION	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**
Alternaria							1	78.4	1.49%	<1	39.2	N/A
Ascospores	5	392	38.5%	3	235	27.3%	27	2120	40.3%	>300	>23500	47.5%**
Aspergillus/Penicillium-like										7	549	1.11%
Basidiospores	3	235	23.1%	4	313	36.4%	19	1490	28.4%	>300	>23500	47.5%**
Cercospora-like										1	78.4	0.158%
Cladosporium	1	78.4	7.69%				18	1410	26.9%	16	1220	2.53%
Curvularia	1	78.4	7.69%				1	78.4	1.49%			
Drechslera/Bipolaris	1	78.4	7.69%									
Epicoccum				2	157	18.2%				<1	39.2	N/A
Myxomycete/Rust/Smut-like	2	157	15.4%				1	78.4	1.49%	1	78.4	0.158%
Nigrospora												
Pithomyces				2	157	18.2%				2	118	0.316%
Pyricularia												
Stachybotrys												
Unknown/Other										5	392	0.791%
TOTAL	**13**	**1020**	**100.%**	**11**	**862**	**100.%**	**67**	**5250**	**100.%**	**>632**	**>49500**	**100.%**
Non-Cellulosic Fibers	-	-	-	-	-	-	-	-	-	-	-	-
Hyphal Fragments	3	235	-	-	-	-	1	78.4	-	2	117.7	-
Insect Parts	-	-	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	1	78.4	-
Skin Cell % of Total Debris		**40-60%**			**40-60%**			**40-60%**			**N/A**	
Total Debris in Background		**40-60%**			**20-40%**			**40-60%**			**N/A**	

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Analyst

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Direct Exam: Spore Trap Analysis

SAI Method B-SOP-003

Customer: ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Chantilly, VA 20151

Attn: William Sargent

Project: ACPS Transportation Facility IAQ Assessment

Lab Order ID: **10093050**
Analysis: STA
Date Received: 09/26/2025
Date Reported: 09/26/2025

Sample ID	A06			A07			A08			**EXTERIOR**		
Lab Sample ID	10093050_0007			10093050_0008			10093050_0009			**AVERAGE**		
Description	Ground Level Front Office			Ground Level Back Office			Ground Level Comer Office			**N/A**		
Lab Notes										**N/A**		
Volume (L)	75			75			75			**N/A**		
Analytical Sensitivity (counts/m³)	78			78			78			**N/A**		
IDENTIFICATION	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**
Alternaria										<1	39.2	N/A
Ascospores	24	1880	43.6%	22	1720	40.7%	8	627	50.0%	>300	>23500	47.5%**
Aspergillus/Penicillium-like										7	549	1.11%
Basidiospores	16	1250	29.1%	18	1410	33.3%	3	235	18.8%	>300	>23500	47.5%**
Cercospora-like										1	78.4	0.158%
Cladosporium	7	549	12.7%	9	705	16.7%	1	78.4	6.25%	16	1220	2.53%
Curvularia	2	157	3.64%	2	157	3.7%						
Drechslera/Bipolaris												
Epicoccum	1	78.4	1.82%							<1	39.2	N/A
Myxomycete/Rust/Smut-like	3	235	5.45%	2	157	3.7%	2	157	12.5%	1	78.4	0.158%
Nigrospora	1	78.4	1.82%	1	78.4	1.85%						
Pithomyces							2	157	12.5%	2	118	0.316%
Pyricularia	1	78.4	1.82%									
Stachybotrys												
Unknown/Other										5	392	0.791%
TOTAL	**55**	**4310**	**100.%**	**54**	**4230**	**100.%**	**16**	**1250**	**100.%**	**>632**	**>49500**	**100.%**
Non-Cellulosic Fibers	-	-	-	-	-	-	-	-	-	-	-	-
Hyphal Fragments	2	157	-	1	78.4	-	1	78.4	-	2	117.7	-
Insect Parts	-	-	-	-	-	-	-	-	-	-	-	-
Pollen	1	78.4	-	-	-	-	1	78.4	-	1	78.4	-
Skin Cell % of Total Debris		**20-40%**			**20-40%**			**20-40%**			**N/A**	
Total Debris in Background		**60-80%**			**60-80%**			**60-80%**			**N/A**	

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Analyst

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Direct Exam: Spore Trap Analysis

SAI Method B-SOP-003

Customer: ECS Mid-Atlantic, LLC
14026 Thunderbolt Place
Chantilly, VA 20151

Attn: William Sargent

Project: ACPS Transportation Facility IAQ Assessment

Lab Order ID: **10093050**
Analysis: STA
Date Received: 09/26/2025
Date Reported: 09/26/2025

Sample ID	A09			OUT02			A			**EXTERIOR**		
Lab Sample ID	10093050_0010			10093050_0011			10093050_0012			**AVERAGE**		
Description	Entrance Hallway			Parking Lot						**N/A**		
Lab Notes							*Not on COC. Labeled "A-10"			**N/A**		
Volume (L)	75			75			75			**N/A**		
Analytical Sensitivity (counts/m³)	78			78			78			**N/A**		
IDENTIFICATION	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**	**Raw Count**	**Concentration (counts/m³)**	**% Of Total**
Alternaria										<1	39.2	N/A
Ascospores	12	940.	42.9%	>300	>23500	47.8%**	6	470.	50.0%	>300	>23500	47.5%**
Aspergillus/Penicillium-like				8	627	1.28%				7	549	1.11%
Basidiospores	7	549	25.0%	>300	>23500	47.8%**	5	392	41.7%	>300	>23500	47.5%**
Cercospora-like				1	78.4	0.159%				1	78.4	0.158%
Cladosporium	1	78.4	3.57%	12	940.	1.91%				16	1220	2.53%
Curvularia	1	78.4	3.57%									
Drechslera/Bipolaris	1	78.4	3.57%									
Epicoccum				1	78.4	0.159%				<1	39.2	N/A
Myxomycete/Rust/Smut-like	6	470.	21.4%	1	78.4	0.159%				1	78.4	0.158%
Nigrospora												
Pithomyces										2	118	0.316%
Pyricularia												
Stachybotrys							1	78.4	8.33%			
Unknown/Other				4	313	0.638%				5	392	0.791%
TOTAL	**28**	**2190**	**100.%**	**>627**	**>49100**	**100.%**	**12**	**940.**	**100.%**	**>632**	**>49500**	**100.%**
Non-Cellulosic Fibers	-	-	-	-	-	-	-	-	-	-	-	-
Hyphal Fragments	2	157	-	1	78.4	-	-	-	-	2	117.7	-
Insect Parts	-	-	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	1	78.4	-	-	-	-	1	78.4	-
Skin Cell % of Total Debris		**20-40%**			**0-20%**			**40-60%**			**N/A**	
Total Debris in Background		**60-80%**			**40-60%**			**20-40%**			**N/A**	

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Analyst

Approved Signatory

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Phone: 336.292.3888 Fax: 336.292.3313
www.sailab.com lab@sailab.com

Lab Use Only
Lab Order ID: 10093098
Client Code: _____

Company Contact Information	
Company: ECS Mid-Atlantic LLC	Contact: William Sargent
Address: 14026 Thunderbolt Place Suite 100	Phone ☐: 202-570-0898
Chantilly, VA 20151	Fax ☐:
	Email ☐: wsargent@ecslimited.com

Billing/Invoice Information	Turn Around Times			
Company:	90 Min.	☐	48 Hours	☐
Contact:	3 Hours	☐	72 Hours	☐
Address:	6 Hours	■	96 Hours	☐
	12 Hours	☐	120 Hours	☐
	24 Hours	☐	144*Hours	☐

Microbiology Test Types	
Spore Trap - Slit Impact, ie, AOC/Allergenco (STA)	■
Spore Trap Other, ie. Micro-5 (STO)	☐
Direct Exam Tape (DET)	☐
Direct Exam Swab (DES)	■
Direct Exam Bulk (DEB)	☐
Fungal Culture Air (FCA)	☐
Fungal Culture Swab (FCS)	☐
Fungal Culture Bulk (FCB)	☐
Bacteria Culture Air (BCA)	☐
Bacteria Culture Bulk (BCB)	☐
Bacteria Culture Swab (BCS)	☐
Biolog (BLG)	☐
Drinking Water (BCC) (Coliform/E.coli)	☐
Other:	☐

PO Number: 47:11652-Z:84

Project Name/Number: ACPS Transportation Facility IAQ Assessment

Sample ID #	Description/Location	Volume/Area	Comments
OUT01	Parking Lot	75	STA
A01	Break Room Office	75	STA
A02	Break Room	75	STA
A03	Main Office	75	STA
A04	Directors Office	75	STA
A05	Ground Level Main Area	75	STA
A06	Ground Level Front Office	75	STA
A07	Ground Level Back Office	75	STA
A08	Ground Level Corner Office	75	STA
A09	Entrance Hallway	75	STA
S01	Break Room Ceiling Tile	75	DES
S02	Break Room Ceiling Tile Near Sink		DES
S03	Break Room Ceiling Tile Near Fridge		DES
S04	Break Room Office		DES
OUT02	Parking Lot	75	STA

Total # of Samples 15

Relinquished by	Date/Time	Received by	Date/Time
William Sargent			9/26
	9.25.25/5:00PM		1030

Accepted ☐

Rejected ☐

A-F-019

Appendix III: Mold Reference and Guidance Documents

MOLD REFERENCE DOCUMENTS AND GUIDANCE

Standards and Publications

Mold Remediation in Schools and Commercial Buildings, EPA, EPA 402-K-01-001, September 2008

A Brief Guide to Mold in the Workplace, Occupational Safety Health Administration (OSHA), SHIB 03-10-10, updated 11-08-13

ANSI/IICRC S520-2015 Standard and Reference Guide for Professional Mold Remediation, Institute of Inspection, Cleaning, and Restoration Certification, Third Edition

ANSI/IICRC S500-2021 Standard and Reference Guide for Professional Water Damage Restoration, Institute of Inspection, Cleaning, and Restoration Certification, Fifth Edition

Bioaerosols: Assessment and Control, American Conference of Governmental Industrial Hygienists, 1999.

Building Air Quality: A Guide for Building Owners and Facility Managers, National Institute for Occupational Safety and Health (NIOSH) and Environmental Protection Agency (EPA) EPA 402F-91-102, December 1991

Mold Moisture and Your Home, EPA, EPA-402-K-02-003, September 2012

WHO Guidelines for Indoor Air Quality: Dampness and Mould, World Health Organization (WHO), 2009

Guidelines on Assessment and Remediation of Fungi in Indoor Environments, New York City Department of Health and Mental Hygiene, November 2008.

Damp Buildings, Human Health, and HVAC Design, Report of the ASHRAE Multidisciplinary Task Group: Damp Buildings, American Society of Heating, Refrigerating, and Air Conditioning Engineers, 2020

Websites

EPA – Mold Resources, https://www.epa.gov/mold

Centers for Disease Control and Prevention (CDC), https://www.cdc.gov/mold/faqs.htm

Department of Energy and the Environment (DOEE), Mold Assessment and Remediation Licensure Regulations https://doee.dc.gov/service/mold-professional-licensing

Virginia Department of Health, Environmental Health, Public Health Toxicology, Mold https://www.vdh.virginia.gov/environmental-health/public-health-toxicology/mold/