MOLD AND MOISTURE ASSESSMENT

ACPS WILLIAM RAMSEY ES R-WING

5700 SANGER AVENUE
ALEXANDRIA, VIRGINIA 22311

ECS PROJECT NO. 47:11652

FOR: ALEXANDRIA CITY PUBLIC SCHOOLS

AUGUST 29, 2025

August 29, 2025

Mr. Lee Conroy
Alexandria City Public Schools
1340 Braddock Place
Suite 620
Alexandria, Virginia 22314
lee.conroy@acps.k12.va.us

ECS Project No. 47:11652

Reference: Mold and Moisture Assessment, ACPS William Ramsey ES R-Wing, 5700 Sanger Avenue, Alexandria, Virginia

Dear Mr. Conroy:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools with the results of the initial Mold and Moisture Assessment performed at ACPS William Ramsey ES R-Wing located at 5700 Sanger 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 47:40815 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
wsargent@ecslimited.com
703-471-8400

Christopher J. Chapman, CIH
Director of Industrial Hygiene
cchapman@ecslimited.com

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1.0 PROJECT DESCRIPTION

William Ramsay Elementary School is located at 5700 Sanger Avenue in Alexandria, Virginia. This is a school building that was reportedly originally constructed in 1958, and is currently used as an elementary school by Alexandria City Public Schools.

Based on information provided by Alexandria City Public Schools, at some point prior to August 23, 2025, the carpeting in the R-wing of the school was cleaned, and the rooms and hallway experienced heightened humidity and moisture levels, resulting in indoor mold growth on susceptible surfaces. ECS also understands that Room 12 in a separate wing of the school had an area of mold growth on the carpet. The carpet in Room 12 was reportedly cleaned by ACPS custodial services in response to the mold.

Alexandria City Public Schools has requested ECS to conduct a Mold and Moisture Assessment to evaluate these concerns.

2.0 PURPOSE

The purpose of the Mold and Moisture Assessment was to conduct visual observations and sampling for mold and moisture to identify evidence of moisture-affected building materials or selective amplification of mold within sampled areas of the subject building. The assessment was limited to Room 12 and the R Wing of William Ramsay. No other buildings or areas within the school were assessed.

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 areas indicated by Alexandria City Public Schools (the R-wing and Room 12). 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 precision electronic 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.

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. Based on the Delmhorst moisture meter settings, moisture levels greater than 1.0% are considered elevated for drywall or other gypsum materials, and greater than 17% is elevated for wood-based materials. This was not a comprehensive moisture mapping survey of all building materials within the areas surveyed, but rather a non-invasive screening of moisture in select areas of specific building materials that may be impacted by moisture.

Fungal spore air samples were collected by means of a high volume pump and Allergenco-D® cassettes. 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.

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.

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 **August 28, 2025**, ECS inspector William Sargent performed a preliminary visual and moisture assessment of the R-wing and Room 12. Below are a list of observations from that day:

- Work to mitigate humidity through drying efforts were not observed at the time of this site visit.
- The school was in session at the time of this site visit. Some of the rooms were occupied and being used as classrooms by students and staff.
- Several rooms in the R-wing had a musty odor, which was most noticeable in rooms with full carpeted floors. These rooms included R9, R7, R6, and R1.

- Mold growth was observed in each of the surveyed rooms in the R Wing. The room components with observed mold growth included black metal desks/cabinets, overhead wooden cabinets in the science lab, cardboard items, cove base, and door frames.
- Relative humidity in the R-wing classrooms ranged from approximately 65-75%, which exceeds the EPA recommended maximum of 60% and inhibits evaporation from damp surfaces.
- Small area rugs found in the R-wing rooms had elevated moisture levels, in addition to carpeted floors.
- Mold growth previously identified in Room 12 appeared to have been effectively removed. Carpeted surfaces in the room did not exhibit elevated levels of moisture, nor was there evidence of mold growth on other pieces of furniture, the walls, etc. Relative humidity and temperature were similar to other indoor areas and below recommended maximum humidity levels..

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

4.1.1 Direct Surface Fungi Samples

Surface swab samples were collected from Room R6 and the R-Wing science lab. 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 - Rare: No evidence of mycelial fragments/conidiophores, growth not likely
- 2 - Light: 10% to 25% of sample covered with mycelial fragments/conidiophores, possible indication of growth
- 3 - Moderate: 25% to 50% of sample covered with mycelial fragments/conidiophores, probable indication of growth
- 4 - Heavy 50% to 100% of sample covered with mycelial fragments/conidiophores, indication of growth
- N/A: Not applicable]

Direct Surface Fungi Samples

Sample Number	Sample Location	Type and Density Rating
S-01	R-wing Science Room (under cabinets)	*Aspergillus/Penicillium-like* - 4
S-02	Room R-6 (cove base)	*Aspergillus/Penicillium-like* - 4

The identification of heavy concentrations of Penicillium/Aspergillus spores from both samples likely indicates mold growth on these surfaces.

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.

4.1.2 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 (%)
Outside (front entrance)	82.7	48.9
Room R-9	72.6	70.3
Room R-4	74.3	64.0
Room R-7	69.9	63.8
Room R-8	69.2	69.3
R-Wing Hallway (2nd Floor)	72.8	66.4
Room R-6	73.7	69.5
Room R-3	73.7	60.3
R-Wing Hallway (1st Floor)	73.5	60.0
Room R-1	71.6	64.5
R-Wing Science Lab	73.4	71.0
Room 12	75.3	53.9

Location	Temperature (°F)	Relative Humidity (%)
Outside (front entrance)	81.5	41.6

5.0 CONCLUSIONS AND RECOMMENDATIONS

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

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 materials prior to mold/water damage material removal efforts.

Mold and Moisture

The site observations and sample results indicate mold colonization on susceptible building materials and contents in the R-wing of the school, which includes rooms R1, R3, R4, R6, R7, R8, R9, and the Science Room. Moisture measurements and infrared imaging identified moisture associated with the carpets and carpeted floors of the rooms. Indoor humidity was relatively high at the time of the survey. The cause of this humidity and moisture is reportedly due to improper drying after floor cleaning.

ECS recommends cleaning or disposal of the affected materials and contents in the surveyed rooms as part of a mold remediation project. The total area of affected materials observed in the R-wing was greater than 100 square feet. Based on EPA, OSHA, and New York City Department of Health guidance, ECS recommends that mold remediation be conducted in a contained work area by a licensed and qualified remediation contractor. A recommended mold remediation protocol is presented below.

At the conclusion of the remediation, ECS recommends that post-remediation survey and sampling be performed to document completion of the scope of work and measure air and surface fungal spore levels. Remediation work should be complete for at least 24 hours prior to the final clearance testing.

Because of the nature of the environment, complete removal of all microbial organisms within a building is not feasible, and is not the goal of remediation. The goal is to restore the work area to at least a pre-loss condition with fungal ecology similar to or better than unaffected areas. It is important to note that if mold sampling is performed as part of the clearance criteria, the results are only reflective of conditions at the time of the test and that mold populations can vary over time, depending upon a number of environmental factors including temperature and humidity. ECS has not addressed correction of water sources (including uncontrolled RH) in this report. If significant mold growth reappears, further assessment of the problem should be performed. The purpose of this effort was to evaluate areas where visible or apparent mold growth and/or moisture intrusion has occurred and provide findings and recommendations for remediation work efforts. Identification

and recommendation(s) for correction of all moisture intrusion concerns was outside of the scope of services for this work. As good practice the source of moisture and corrective actions should be identified by a qualified contractor/engineer.

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.

Mold Remediation Protocol

Recommended remediation protocols for mold-impacted building materials and contents are listed below for visible mold impacted materials. Remediation methods should be based on the size and specific scope of work needed and in accordance to regulations of encountered hazardous materials.

This plan does not address remediation or abatement for asbestos, lead, or other hazardous materials. Any applicable federal, state or local regulations or requirements must also be followed. This scope of work is specific to the conditions observed at the project location at the time of the survey, and may not be appropriate in other locations or circumstances. This scope of work is also based on the understanding that the source of the moisture is elevated humidity resulting in superficial mold amplification, and the materials have not been affected by Category II or III water as defined by the Institute for Inspection, Cleaning, and Restoration Contractors (IICRC). However, some materials in the work area have visible mold contamination (IICRC Condition 3). Care must be taken during the remediation to prevent further contamination of other items in the room(s) with settled spores and fungal fragments (IICRC Condition 2).

Remediation activities should be performed in general accordance with the EPA document “Mold Remediation in Schools and Commercial Buildings”, as well as the OSHA publication, "A Brief Guide to Mold in the Workplace". Additional mold remediation guidance documents are also referenced in Appendix V at the end of this report.

Worker protection is the responsibility of the remediation contractor. ECS recommends that workers performing this work wear proper personal protective equipment (PPE), including, at a minimum, half-face respirators with NIOSH P-100 particulate filters, gloves, eye protection, and disposable protective clothing per OSHA standards for PPE.

The mold remediation in the R-wing should be performed under full containment. Remediation in all areas addressed in this protocol should be performed by a licensed and/or certified contractor with workers trained in proper methods for mold abatement. The Contractor should be competent with work areas of this size of project, greater than 100 SF of material removal/cleaning efforts.

HVAC System

- The HVAC systems serving the remediation area should be deactivated and locked out for the duration of the remediation.
- The humidity within the work area should be maintained below 60% relative humidity.

- Pre-cleaning of the ventilation system diffusers should be the last item during setup and the first item of remediation. After cleaning, individually seal all ventilation openings (supply and return).

Work Area Setup

Signage should be placed outside of the work areas at all entry points to the work area to notify entrants of possible hazards. Opaque barriers may be requested by the owner to reduce visibility of the process. Signs should not be placed outside of opaque visibility barriers, only on the actual entrances to the work area.

The workers should wear disposable protective clothing in the work area and remove it prior to exiting the work area to prevent tracking of contamination. Visitors shall not be permitted into the work areas without the approval of the Contractor and Owner and will require proper PPE.

A full containment work area shall be used in the R-wing, on both floors. The contractor should seal the HVAC vents in the R-wing, and seal any other penetrations and openings. Double-flap or zippered polyethylene doors should be installed for entry into the work area. HEPA-filtered air filtration devices (AFDs) shall be utilized in the work area, and the exhaust shall be ducted outside the work area where feasible.

ECS recommends that a negative pressure enclosure be created in the R-wing work area on both floors using plastic barriers and duct tape. HEPA filtered Negative Air Machines (NAMs) should be exhausted outside the building wherever possible to maintain negative pressure continuously inside the containment.

ECS recommends drawing make-up air from/through the interior hallways of the R-Wing. Make-up air should not be restricted by zipper doors. The use of flap doors is recommended for at least one entrance to the work area. The target pressure differential in the R-wing on both floors is -0.02 to -0.04 inches of water column (approximately -5 to -10 pascals). The exhausted airflow should be sufficient to achieve 4 air changes per hour.

All items to be discarded shall be documented by means of photograph. This documentation may be performed outdoors if desired, prior to disposal of the items A ground cover/drop cloth should be placed where items are staged for photographs.

Surface Remediation

Based on the nature of contamination (surface mold due to elevated humidity), most of the scope of work will consist of surface remediation.

- Surface remediation should include HEPA vacuuming of all surfaces and a damp-wipe with a mild detergent. Some surfaces may require scrubbing with a cloth or brush. The surfaces should not be saturated with cleaning solution. Discard cleaning cloths when overly soiled or upon completion of the work shift. After wiping, repeat HEPA vacuuming.

- All surfaces should be left dry, visibly free from contamination and debris. (Some visible staining may remain).
- Upholstered surfaces shall be surface cleaned by means of repeated HEPA vacuuming and agitation of the surface with a suitable brush and/or air washing
- Metal and finished wood furniture should be surface cleaned by damp wiping.
- Unfinished wood may be surface cleaned at the owner's discretion.
- Sealed plastic storage bins, cabinets, desks, and instructional materials should remain sealed and be surface cleaned.
- Intact vinyl-covered furniture is non-porous or semi-porous and can typically be cleaned by wiping with a detergent solution. If the vinyl is torn or otherwise damaged and exposes porous fill material, the item may need to be discarded as a porous material.

Content Remediation

A designated area within the work area shall be allocated for cleaning/remediation of smaller contents. This area shall be part of the contained work area, but shall have dedicated engineering controls, equipment, and personnel. Preparation of the “content remediation area” shall include HEPA vacuuming of all surfaces to remove pre-existing contamination. A drop cloth shall be placed on the floor in this area. Dedicated cleaning materials shall be provided. A HEPA-filtered air scrubber or negative air machine (NAM) shall be provided for the content remediation area. The HEPA air scrubber/NAM shall be positioned to create directional airflow across the work area, away from the breathing zone of workers. Dedicated HEPA vacuums with new (or like-new) replaceable attachments shall be provided. Soiled remediation equipment from other locations shall not be used for content remediation.

Contents in the following rooms will require delineation:

- Room R1 (Storage Room)
- Room R3 (Classroom)
- Science room
- Room R4 (Classroom)
- Room R6 (Storage Room)
- Room R7 (Classroom)
- Room R8 (Classroom)
- Room R9 (Classroom)

The decision of whether to clean or discard items should be made based upon multiple factors including (but not limited to) value, condition, availability and ease of replacement, risk of hidden contamination, exposure potential, and susceptibility of the population at risk for exposure.

- In general, ECS recommends that all porous materials exhibiting visible mold be properly disposed. Most porous materials with Condition 3 (mold growth) cannot be effectively remediated and should be discarded in accordance with IICRC standards.
    - Some porous materials can be restored, but for many materials, replacement is a more economical option.

- In general, fabrics, and upholstery are recommended to be discarded if they are visibly impacted by mold. Thus, play mats, blankets, area rugs, pillows, canvas bags or covers, fabric toys, and felt items should be discarded.

After sorting and disposing contents, all surfaces within the content remediation area should be fine cleaned by damp wiping and HEPA vacuuming. The drop cloth should be discarded.

Conclusion

Following remediation, the work area(s) should remain under negative pressure and air filtration devices should continue running until the area(s) are released by the Owner. A minimum of 24-48 hours of air filtration is recommended following the conclusion of remediation and prior to air sampling.

The HVAC system and associated ducts and diffusers should be inspected by a professional HVAC contractor for settled or built-up mold spores or soiling within the system. If deficiencies are identified during the inspection, the system should be cleaned as needed. Inspection and cleaning of the HVAC system should be performed per the National Air Duct Cleaners Association (NADCA) Standard for Assessment, Cleaning and Restoration of HVAC Systems (ACR).

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 - View of R-Wing 2nd Floor Hallway



2 - View of room R9



3 - Mold growth on cove base in room R9



4 - View of room R4



5 - Mold growth on shelf in room R4



6 - View of room R7



7 - Mold growth on wood shelf in Room R7



8 - View of room R8



9 - Mold growth on metal cabinet in room R8



10 - View of room R6



11 - Mold growth on room R6 cove base



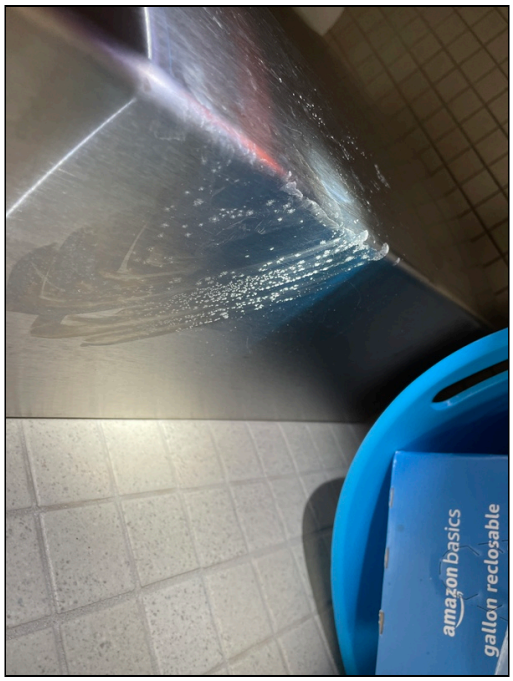
12 - Elevated moisture level in carpet in room R6



13 - Mold growth on rolling cart in room R6



14 - View of room R3



15 - Mold growth on trash receptacle in bathroom of room R3



16 - View of room R1



17 - Mold growth on metal cabinet in room R1



18 - Mold growth under table in room R1



19 - Elevated moisture level in carpet in room R1



20 - View of the Science room



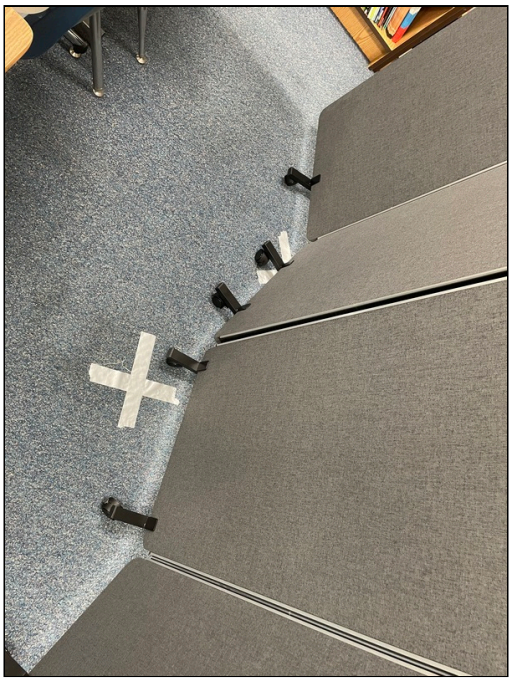
21 - Mold growth under wall cabinets in Science room



22 - Mold growth on wood shelf in Science room



23 - View of room 12



24 - Area in room 12 where mold was previously growing

Appendix II: Air Sample Results

William Ramsay ES R-Wing Mold Assessment
5700 Sanger Ave, Alexandria, VA 22311
ECS Project No. 47:11652-Y
Survey Date: August 25, 2025

Fungal Spore Trap Air Sample Results

Sample Number	Sample Location	Alternaria	Ascospores	Aspergillus	Basidiospores	Cladosporium	Curvularia	Cercospora - like	Epicoccum	Pithomyces	Torula	Unkown/Other	Total*
1	Room R-9			23,500		313	78			78			23,970
2	Room R-4			23,500	78	1,250			157				24,985
3	Room R-7	157	4,940			78	157						5,332
4	Room R-8	78		3,060									3,138
5	R-Wing 2nd Floor Hallway	157		2,120		549							2,826
6	Room R-6	78		2,590		313							2,981
7	Room R-3			1,410	78	1,100							2,588
8	R-Wing 1st Floor Hallway	157	705			2,270	1,020			157			4,309
9	Room R-1	78	392	3,210		1,330							5,010
10	R-Wing Science Room			9,090				78					9,168
11	Room 12	392		705	78		78	313					1,567
OUT01	Front Entrance	235	10,600	392	4,860	23,500	862	157	157	313		78	41,154
OUT04	Front Entrance	705	4,230	2,040	1,650	23,500	157	78	157	157	78	78	32,831

All results are in spores per cubic meter (spores/m3)
Blank = None detected
*Note: Total counts may not match laboratory reports due to rounding.

Appendix III: 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: William Ramsey ES

Lab Order ID: **10090600**
Analysis: DES
Date Received: 08/26/2025
Date Reported: 08/26/2025

Sample ID	S-01	S-02						
Lab Sample ID	10090600_0001	10090600_0002						
Description	R-Wing Science R	Room R-6						
Lab Notes								
IDENTIFICATION								
Aspergillus/Penicillium-like	4	4						
Fruiting Bodies								
Hyphal Fragments	1	2						
Pollen								
Debris	1	1						

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)

Palmer Hines (2)
Analyst

Palmer Hines
Approved Signatory

1009060O

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: Revised
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
	brhett@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-W1:84

Project Name/Number: William Ramsey ES

Sample ID #	Description/Location	Volume/Area	Comments
OUT1	Outdoors (Front Entrance)	75 L	Air Sample
01	Room R-9	75 L	Air Sample
02	Room R-4	75 L	Air Sample
03	Room R-7	75 L	Air Sample
04	Room R-8	75 L	Air Sample
05	R-Wing 2nd Floor Hallway	75 L	Air Sample
06	Room R-6	75 L	Air Sample
07	Room R-3	75 L	Air Sample
08	R-Wing 1st Floor Hallway	75 L	Air Sample
09	Room R-1	75 L	Air Sample
10	R-Wing Science Room	75 L	Air Sample
11	Room 12	75 L	Air Sample
OUT2	Outdoors (Front Entrance)	75 L	Air Sample
S-01	R-Wing Science Room	N/A	Swab Sample
S-02	Room R-6	N/A	Swab Sample

Total # of Samples 15

Relinquished by	Date/Time	Received by	Date/Time
		Accepted ☑	8/26 1030AM
		Rejected ☐	

Page 1 of 1

A-F-019

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: William Ramsey ES

Lab Order ID: **10090598**
Analysis: STA
Date Received: 08/26/2025
Date Reported: 08/26/2025

Sample ID	OUT1			01			02			**EXTERIOR**		
Lab Sample ID	10090598_0001			10090598_0002			10090598_0003			**AVERAGE**		
Description	Outdoors (front entrance)			Room R-9			Room R-4			**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	3	235	0.571%							6	470.	1.27%
Ascospores	135	10600	25.7%							95	7420	20.0%
Aspergillus/Penicillium-like	5	392	0.952%	>300	>23500	98.0%**	>300	>23500	94.0%**	16	1220	3.38%
Basidiospores	62	4860	11.8%				1	78.4	0.313%	42	3260	8.86%
Cercospora-like	2	157	0.381%							2	118	0.422%
Cladosporium	>300	>23500	57.1%**	4	313	1.31%	16	1250	5.02%	>300	>23500	63.3%**
Curvularia	11	862	2.1%	1	78.4	0.327%	2	157	0.627%	7	510.	1.48%
Epicoccum	2	157	0.381%							2	157	0.422%
Pithomyces	4	313	0.762%	1	78.4	0.327%				3	235	0.633%
Torula										<1	39.2	N/A
Unknown/Other	1	78.4	0.190%							1	78.4	0.211%
TOTAL	**>525**	**>41100**	**100.%**	**>306**	**>24000**	**100.%**	**>319**	**>25000**	**100.%**	**>474**	**>37000**	**100.%**
Non-Cellulosic Fibers	1	78.4	-	3	235	-	-	-	-	2	117.7	-
Hyphal Fragments	5	392	-	1	78.4	-	2	157	-	5	392	-
Insect Parts	-	-	-	-	-	-	-	-	-	-	78.5	-
Pollen	6	470.	-	-	-	-	-	-	-	8	587.5	-
Skin Cell % of Total Debris		**0-20%**			**20-40%**			**40-60%**			**N/A**	
Total Debris in Background		**80-100%**			**40-60%**			**20-40%**			**N/A**	

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Palmer Hines (13)
Analyst

Approved Signatory

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

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: William Ramsey ES

Lab Order ID: **10090598**
Analysis: STA
Date Received: 08/26/2025
Date Reported: 08/26/2025

Sample ID	03			04			05			**EXTERIOR**		
Lab Sample ID	10090598_0004			10090598_0005			10090598_0006			**AVERAGE**		
Description	Room R-7			Room R-8			R-Wing 2nd Floor Hallway			**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										6	470.	1.27%
Ascospores	2	157	2.94%	1	78.4	2.5%	2	157	5.56%	95	7420	20.0%
Aspergillus/Penicillium-like	63	4940	92.6%	39	3060	97.5%	27	2120	75.0%	16	1220	3.38%
Basidiospores										42	3260	8.86%
Cercospora-like										2	118	0.422%
Cladosporium	1	78.4	1.47%				7	549	19.4%	>300	>23500	63.3%**
Curvularia	2	157	2.94%							7	510.	1.48%
Epicoccum										2	157	0.422%
Pithomyces										3	235	0.633%
Torula										<1	39.2	N/A
Unknown/Other										1	78.4	0.211%
TOTAL	**68**	**5330**	**100.%**	**40**	**3130**	**100.%**	**36**	**2820**	**100.%**	**>474**	**>37000**	**100.%**
Non-Cellulosic Fibers	2	157	-	-	-	-	2	157	-	2	117.7	-
Hyphal Fragments	1	78.4	-	1	78.4	-	-	-	-	5	392	-
Insect Parts	-	-	-	-	-	-	-	-	-	-	78.5	-
Pollen	-	-	-	-	-	-	-	-	-	8	587.5	-
Skin Cell % of Total Debris		**60-80%**			**60-80%**			**60-80%**			**N/A**	
Total Debris in Background		**40-60%**			**0-20%**			**0-20%**			**N/A**	

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Palmer Hines (13)
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: William Ramsey ES

Lab Order ID: **10090598**
Analysis: STA
Date Received: 08/26/2025
Date Reported: 08/26/2025

Sample ID	06			07			08			**EXTERIOR**		
Lab Sample ID	10090598_0007			10090598_0008			10090598_0009			**AVERAGE**		
Description	Room R-6			Room R-3			R-Wing 1st Floor Hallway			**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										6	470.	1.27%
Ascospores	1	78.4	2.63%				2	157	3.64%	95	7420	20.0%
Aspergillus/Penicillium-like	33	2590	86.8%	18	1410	54.5%	9	705	16.4%	16	1220	3.38%
Basidiospores				1	78.4	3.03%				42	3260	8.86%
Cercospora-like										2	118	0.422%
Cladosporium	4	313	10.5%	14	1100	42.4%	29	2270	52.7%	>300	>23500	63.3%**
Curvularia							13	1020	23.6%	7	510.	1.48%
Epicoccum										2	157	0.422%
Pithomyces							2	157	3.64%	3	235	0.633%
Torula										<1	39.2	N/A
Unknown/Other										1	78.4	0.211%
TOTAL	**38**	**2980**	**100.%**	**33**	**2590**	**100.%**	**55**	**4310**	**100.%**	**>474**	**>37000**	**100.%**
Non-Cellulosic Fibers	2	157	-	-	-	-	3	235	-	2	117.7	-
Hyphal Fragments	1	78.4	-	-	-	-	8	627	-	5	392	-
Insect Parts	-	-	-	-	-	-	-	-	-	-	78.5	-
Pollen	-	-	-	-	-	-	-	-	-	8	587.5	-
Skin Cell % of Total Debris		**60-80%**			**60-80%**			**60-80%**			**N/A**	
Total Debris in Background		**40-60%**			**0-20%**			**40-60%**			**N/A**	

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Palmer Hines (13)
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: William Ramsey ES

Lab Order ID: **10090598**
Analysis: STA
Date Received: 08/26/2025
Date Reported: 08/26/2025

Sample ID	09			10			11			**EXTERIOR**		
Lab Sample ID	10090598_0010			10090598_0011			10090598_0012			**AVERAGE**		
Description	Room R-1			R-Wing Science Room			Room 12			**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	1.56%							6	470.	1.27%
Ascospores	5	392	7.81%				5	392	25.0%	95	7420	20.0%
Aspergillus/Penicillium-like	41	3210	64.1%	116	9090	99.1%	9	705	45.0%	16	1220	3.38%
Basidiospores							1	78.4	5.00%	42	3260	8.86%
Cercospora-like										2	118	0.422%
Cladosporium	17	1330	26.6%	1	78.4	0.855%	4	313	20.0%	>300	>23500	63.3%**
Curvularia							1	78.4	5.00%	7	510.	1.48%
Epicoccum										2	157	0.422%
Pithomyces										3	235	0.633%
Torula										<1	39.2	N/A
Unknown/Other										1	78.4	0.211%
TOTAL	**64**	**5020**	**100.%**	**117**	**9170**	**100.%**	**20**	**1570**	**100.%**	**>474**	**>37000**	**100.%**
Non-Cellulosic Fibers	-	-	-	-	-	-	-	-	-	2	117.7	-
Hyphal Fragments	-	-	-	-	-	-	4	313	-	5	392	-
Insect Parts	-	-	-	-	-	-	-	-	-	-	78.5	-
Pollen	-	-	-	-	-	-	-	-	-	8	587.5	-
Skin Cell % of Total Debris		**60-80%**			**80-100%**			**80-100%**			**N/A**	
Total Debris in Background		**0-20%**			**20-40%**			**60-80%**			**N/A**	

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Palmer Hines (13)
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: William Ramsey ES

Lab Order ID: **10090598**
Analysis: STA
Date Received: 08/26/2025
Date Reported: 08/26/2025

Sample ID	OUT2									**EXTERIOR**		
Lab Sample ID	10090598_0013									**AVERAGE**		
Description	Outdoors (front entrance)									**N/A**		
Lab Notes										**N/A**		
Volume (L)	75									**N/A**		
Analytical Sensitivity (counts/m³)	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	9	705	2.15%							6	470.	1.27%
Ascospores	54	4230	12.9%							95	7420	20.0%
Aspergillus/Penicillium-like	26	2040	6.21%							16	1220	3.38%
Basidiospores	21	1650	5.01%							42	3260	8.86%
Cercospora-like	1	78.4	0.239%							2	118	0.422%
Cladosporium	>300	>23500	71.6%**							>300	>23500	63.3%**
Curvularia	2	157	0.477%							7	510.	1.48%
Epicoccum	2	157	0.477%							2	157	0.422%
Pithomyces	2	157	0.477%							3	235	0.633%
Torula	1	78.4	0.239%							<1	39.2	N/A
Unknown/Other	1	78.4	0.239%							1	78.4	0.211%
TOTAL	**>419**	**>32800**	**100.%**	**-**	**-**	**-**	**-**	**-**	**-**	**>474**	**>37000**	**100.%**
Non-Cellulosic Fibers	2	157	-	-	-	-	-	-	-	2	117.7	-
Hyphal Fragments	5	392	-	-	-	-	-	-	-	5	392	-
Insect Parts	2	157	-	-	-	-	-	-	-	-	78.5	-
Pollen	9	705	-	-	-	-	-	-	-	8	587.5	-
Skin Cell % of Total Debris		**0-20%**			**N/A**			**N/A**			**N/A**	
Total Debris in Background		**40-60%**			**N/A**			**N/A**			**N/A**	

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Palmer Hines (13)
Analyst

Approved Signatory

100905 98

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: Revised
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
	brhett@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 ☐

PO Number: 47:11652-W1:84

Project Name/Number: William Ramsey ES

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
OUT1	Outdoors (Front Entrance)	75 L	Air Sample
01	Room R-9	75 L	Air Sample
02	Room R-4	75 L	Air Sample
03	Room R-7	75 L	Air Sample
04	Room R-8	75 L	Air Sample
05	R-Wing 2nd Floor Hallway	75 L	Air Sample
06	Room R-6	75 L	Air Sample
07	Room R-3	75 L	Air Sample
08	R-Wing 1st Floor Hallway	75 L	Air Sample
09	Room R-1	75 L	Air Sample
10	R-Wing Science Room	75 L	Air Sample
11	Room 12	75 L	Air Sample
OUT2	Outdoors (Front Entrance)	75 L	Air Sample
S-01	R-Wing Science Room	N/A	Swab Sample
S-02	Room R-6	N/A	Swab Sample

Total # of Samples 15

Relinquished by	Date/Time	Received by	Date/Time
		8/26 10:30 am	

Accepted ☑
Rejected ☐

A-F-019

Appendix IV: 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/