January 22, 2026
Project No. 25-103

TO: ***Lee Conroy, CEM***
Director of Safety and Security Services
lee.conroy@acps.k12.va.us

FROM: Lian Zadeng, Program Manager
Noel Bustillo, Industrial Hygienist

SUBJECT: **Alexandria City HS – IAQ Assessment**
3775 W Braddock Rd Alexandria, VA 22302

Task Summary Information

Prime Customer/Site-Contact:	Lee Conroy
Atmos Site Visit:	01/16/2026
Atmos Site Representative:	Noel Bustillo

Background

On January 16, 2026, Industrial Hygienist Mr. Noel Bustillo of Atmos Solutions Inc. conducted the emergency IAQ assessment at Alexandria City High School, located at 3775 W. Braddock Road, Alexandria, VA 22302. The assessment was performed at the request of Mr. Lee Conroy, Director of Safety and Security Services for Alexandria City Public Schools (ACPS). The assessment was conducted in response to an ACPS employee discovering standing water from behind the adjoining walls between Classroom 1200 and the spandrel.

A visual inspection of the affected areas was performed, followed by direct reading of index indoor air quality (IAQ) parameters, microbial air sampling, and direct surface sampling. A total of seven (7) samples were collected during the assessment, one (1) outdoor air reference sample, three (3) indoor air samples and three (3) tape lift samples.

The indoor samples are compared to the outdoor sample to determine if there is mold amplification inside. If the indoor air samples contain the same species of mold as the outdoor reference sample and the spore concentrations are not significantly higher, the sample is considered acceptable. However, if different mold species are detected indoors or if the indoor spore concentrations are significantly elevated compared to the outdoor levels, this may indicate potential indoor mold amplification, and the sample is considered not acceptable.

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Air Sample Results Summary:

- Spandrel (near door 28) –Acceptable
- Classroom 1200 –Acceptable
- Restroom (K-Wing) – Acceptable
- Exterior (door 28) – Reference

In addition to microbial air sampling direct surface (tape lift) sampling was performed. A total of three (3) tape lift samples were collected at targeted locations representative of areas of concern. If a tape lift sample indicates medium to high fungal growth, or if the identified mold species differ significantly from those observed in the exterior reference air sample, the result is considered indicative of potential indoor mold amplification, and the sample is considered "not acceptable". Conversely, if a tape lift sample indicates no growth or low levels of a spore type that is consistent with the exterior reference air sample—and there is no visible mold growth or evidence of moisture damage—then the sample is considered acceptable and does not suggest active indoor mold amplification.

Direct surface (tape lift) Sample Results Summary:

- S-1 – Not Acceptable
- S-2 – Not Acceptable
- S-3 – Not Acceptable

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IAQ ASSESSMENT ACTIVITIES

The scope of the assessment included a walkthrough inspection of the subject areas, interviews with the site contact to gather information on any observed moisture concerns or potential fungal growth, and environmental data collection. This included measurements of temperature and relative humidity in designated areas, as well as air sampling for total airborne mold spores using a high-volume air pump with spore trap cassettes.

Field investigation and sampling activities were conducted on January 16, 2026. Prior to the commencement of assessment activities, ACPS Building Service Supervisor provided site information and assisted in providing access to the facility.

Limitations

The scope of this assessment was limited due to restricted access to the primary area of concern where the source of the water intrusion was suspected to be located behind wall assemblies. Access into the wall cavities was not available, as staff were unable to create a larger access opening to allow entry and further inspection. As a result, Atmos Solutions Inc. was unable to directly determine the exact source of the leak or conduct additional intrusive investigation within the wall cavity at the time of this assessment.

Visual Assessment

A walk-through evaluation was conducted, including a visual inspection of the Spandrel room, the area near door 28, classroom 1200, and K-wing restroom. Visible suspected mold growth was observed in classroom 1200 drywall behind baseboard cover and the Interspatial wall space between the Spandrel Room, Classroom 1200, K-wing restroom. A summary of the findings can be found in **Table 2.**

Direct reading of index indoor air quality (IAQ) parameter

As part of the IAQ assessment Atmos also took direct measurements of %Rh, temperature, carbon dioxide, and carbon monoxide using a 7585 TSI Q-trak serial number 7580204810. Summary of the findings can be found in **Table 3**.

1. **Relative Humidity (RH)**
   Relative humidity (RH) plays a significant role in thermal comfort and indoor air quality**.** High RH impairs the body's ability to cool through sweat evaporation, potentially leading to discomfort and promoting the growth of dust mites, mold, and microbes, which can cause health issues—especially for sensitive individuals. It may also lead to fatigue and difficulty concentrating. Low RH, often observed during winter, results from dry outdoor air and heating systems, further exacerbated by indoor electronics and HVAC operations. This can cause symptoms like dry skin, irritated eyes, sore throat, and respiratory discomfort. To maintain comfort and prevent microbial growth, OSHA recommends indoor RH levels between 20–60%, while ASHRAE Standard 62.1-2016 suggests a range of 30–60%, with a maximum of 65% to prevent condensation. Although OSHA has no enforceable limits on temperature or humidity, it advises maintaining indoor temperatures between 68–76°F and emphasizes air treatment, including humidity control, as a best practice for managing indoor air quality.

2. **Temperature**

Temperature and RH are the two indoor air quality parameters for thermal comfort. Readings were taken and compared to the recommended guidelines published by ASHRAE. *ASHRAE Standard 55-2013 (Thermal Environmental Conditions for Human Occupancy)* recommends a seasonal temperature range between approximately 68 to 80 degrees Fahrenheit, depending on the RH levels.

Table 1: Temperature/Humidity Ranges for Comfort, per ASHRAE 55-2013)

Relative Humidity (%)	Winter Temperature Range (°F)	Summer Temperature Range (°F)
30	68.5-76	74-80
40	68.5-75.5	73.5-79.5
50	68.5-74.5	73-79
60	68.0-74	72.5-78

3. **Carbon Dioxide (CO_2)**

CO_2 is a normal constituent of exhaled air and is not considered a typical indoor environment health concern. CO_2 indoor concentration could however be used as a screening tool to evaluate the effectiveness of the building ventilation systems supplying outdoor air to the work areas, The introduction of filtered and tempered outdoor air is important for the comfort of employees (heating & cooling), and for the dilution of indoor contaminants and irritants.

Due to health risks associated with CO_2 exposure, OSHA states that *"average exposure for healthy adults during an 8-hour workday should not exceed 5,000 ppm*". *AHSRAE Standard 62.1-2016, Appendix C* states that "an acceptable maximum indoor CO_2 concentration, under maximum occupancy condition, would be the prevailing ambient CO_2 concentration plus 700 ppm". Assuming an ambient concentration of 400ppm, the indoor concentration should not be more than 1,100 ppm (i.e., 400 ppm + 700 ppm). Any CO_2 concentration above 1,100 ppm may lead to series of complaints by occupants. It is good to note that concentrations above 1,100 ppm should not be misinterpreted as hazardous or immediately dangerous to life. Instead, an elevated CO_2 level indicates that the amount of outside air brought into a building is insufficient.

4. **Carbon Monoxide (CO)**

CO is an odorless, deadly, poisonous, and colorless gas, which is a normal by-product of incomplete combustion of various fuels, including coal, wood, charcoal, oil, kerosene, propane, and natural gas. Some common sources of CO inside a building include gas hot water heaters, gas heating systems, gas stoves, portable kerosene heaters, cigarette

smokers, etc. Also, products and equipment powered by internal combustion engines such as portable generators, cars, lawn mowers, and power washers also generate CO.

The current OSHA permissible exposure limit (PEL) for CO is 50 ppm parts of air as an 8-hour time-weighted average (TWA). The National Institute for Occupational Safety and Health (NIOSH) has established a recommended exposure limit (REL) for CO of 35 ppm, also as an 8-hour TWA and 200 ppm as a ceiling (NIOSH 1992). The American Conference of Governmental Industrial Hygienist (ACGIH) has assigned CO a threshold limit value (TLV) of 25 ppm as a TWA for a normal 8-hour workday and a 40-hour workweek. ASHRAE references the Environmental Protection Agency's National Ambient Air Quality Standards (NAAQS) CO regulations as a guideline for acceptable indoor air concentrations of CO. For indoor environments, CO concentrations are normally between 0 ppm to 5 ppm. Concentrations above 5 ppm may indicate the presence of exhaust gases in the indoor environment and should be investigated. CO concentrations inside buildings should not exceed 9ppm in areas where combustion sources are not present or emissions from such sources are not readily entrained into the building structure.

Field Observations and Analytical Summary

This section presents the findings from the visual inspection and indoor air quality (IAQ) measurements conducted during the site investigation. The assessment included observation for visible mold, detection of any unusual odors, identification of moisture intrusion, and measurement of key IAQ parameters using direct-reading instruments and laboratory analysis.

Prior to collecting airborne samples, Atmos conducted a visual assessment of the site to identify any indicators of potential indoor air quality concerns. A summary of the visual assessment of each location is provided in **Table 2**.

Table 2 – Field observations

Sample Location	Visible Mold	Odors	Moisture Detected
Spandrel Room (near door 28)	Visible mold observed on the backside of wallboard within wall cavity.	Sewer water	Moisture readings were taken and ranged from 18.0-30.2, visual moisture was also observed
Classroom 1200	Visible mold observed on drywall behind the baseboard	None	Moisture readings were taken and ranged from 24.3-29.5, visual moisture was also observed
Restroom (K-wing)	No visible mold was observed	None	None Observed

Airborne Mold Sampling

The microbial samples were transported under standard chain-of-custody procedures for laboratory analysis of airborne and surface mold indicators. Samples were submitted to EMSL Analytical, Inc. in Beltsville, Maryland, a laboratory accredited through the American Industrial Hygiene Association's Laboratory Accreditation Programs. Copies of the chain-of-custody documentation and laboratory analytical reports are included as ***Attachment 1*****.**

Air samples were collected to evaluate indoor air quality and assess potential microbial contamination. Sampling was performed using Buck BioAire™ Model B520 pumps equipped with Air-O-Cell™ spore trap cassettes. Each sample was collected over a five-minute period at a calibrated flow rate of 15 liters per minute, resulting in a total air volume of 75 liters per sample, consistent with the manufacturer's specifications.

The Air-O-Cell™ spore trap is designed for rapid collection and quantitative analysis of airborne non-viable particulate matter. This includes mold spores, pollen, insect fragments, skin cells, fibers (e.g., asbestos, fiberglass, cellulose), and various inorganic particles. The sampling strategy was implemented to quantify the concentration of airborne fungal spores within interior spaces and compare those levels to the natural outdoor fungal background—commonly referred to as the "normal fungal ecology."

A total of four (4) air samples were collected during the assessment: one (1) outdoor reference sample, and three (3) indoor air samples. Following collection, the cassettes were sealed.

The laboratory results of the bioaerosol analysis revealed that interior total mold spore concentrations from the tested locations ranged between 180-630 spores per cubic meter (spr/m3). The exterior comparison samples had a total mold spore concentration of 710 spr/m3.

Laboratory analysis indicated that the total airborne spore concentrations in all indoor samples were lower than or within the same range as the outdoor reference sample, with comparable fungal species and distribution patterns. This is generally considered acceptable based on current industry standards.

Table 3 presents a comparison of indoor and outdoor mold spore types, highlighting those detected exclusively indoors or common to both environments.

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Table 3 – Direct reading using a 7585 TSI Q-trak serial number 7580204810 and laboratory result summary

Sample Location (sample #'s)	Temperature (°F)[1]	Relative Humidity[2]	Carbon Monoxide[3]	Carbon Dioxide (ppm)[4]	Spore Type	Spore Count (spores/m³)	Acceptable/ Not Acceptable
Spandrel – Near door 28 (7884)	68.5	31.6	<0.2	1146	Aspergillus/Penicillium++ Basidiospores Cladosporium Myxomycetes++ Scopulariopsis/Microascus Stachybotrys/Memnoniella **Total**	400 100 40 40 40* 10* **630**	**Acceptable**
Classroom 1200 (8680)	70.5	25.0	<0.2	816	Aspergillus/Penicillium++ Basidiospores Cladosporium Epicoccum Myxomycetes++ Stachybotrys/Memnoniella **Total**	90 100 40 40 10* 40 **320**	**Acceptable**
Restroom – K-wing (7920)	70.9	29.5	<0.2	882	Aspergillus/Penicillium++ Basidiospores Curvularia Myxomycetes++ **Total**	40 90 40 10* **180**	**Acceptable**
Exterior – Front of Bldg (0448)	57.9	15.7	<0.2	439	Aspergillus/Penicillium++ Basidiospores Cladosporium Epicoccum Myxomycetes++ **Total**	480 90 90 10* 40 **710**	**N/A**

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Sample Location (sample #'s)	Temperature (°F)[1]	Relative Humidity[2]	Carbon Monoxide[3]	Carbon Dioxide (ppm)[4]	Spore Type	Spore Count (spores/m³)	Acceptable/ Not Acceptable

Notes:

1. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) recommends maintaining indoor temperatures between 68°F and 80°F to ensure thermal
2. comfort for occupants under most seasonal conditions.
3. The Occupational Safety and Health Administration (OSHA) advises that indoor relative humidity should remain below 70% to minimize the risk of microbial growth. A preferred range of 25% to 60% is commonly cited by ASHRAE and other IAQ guidelines to maintain both occupant comfort and building material integrity.
4. Acceptable indoor concentrations of carbon monoxide (CO) typically range between 0 parts per million (ppm) and 5 ppm. Levels above this threshold may indicate inadequate ventilation or combustion sources and warrant further investigation in accordance with EPA and OSHA indoor air quality standards.
5. The indoor concentration of carbon dioxide should not exceed 700 ppm above the outdoor ambient level, as per ASHRAE Standard 62.1. An indoor-outdoor difference greater than this threshold may indicate insufficient ventilation and a buildup of occupant-generated CO_2.

Direct surface (tape lift) sampling

Tape lift samples were collected using clear adhesive slides provided by an AIHA-accredited laboratory. The adhesive side of each slide was pressed firmly against suspect surfaces to collect mold spores, hyphal fragments, and other particulate matter. Targeted surface included drywall with visible staining, discoloration, or suspected microbial growth. A total of three (3) direct surface samples were collected and submitted under standard chain-of-custody procedures for laboratory analysis. Samples were examined via direct microscopic analysis to determine the presence, concentration, and genus of fungal structures. Results were evaluated for spore density and morphological indicators. Samples showing medium to high concentrations of fungal material or water-indicator species (e.g., *Cladosporium* and *Stachybotrys*) were classified as indicative of fungal amplification. The results are summarized in **Table 4.**

Table 4 – Direct surface (tape lift) sampling results

Sample #	Location	Material	Results	Notes
S-1	Spandrel – Near door 28	Backside of purple drywall within wall cavity	**Not Acceptable**	Lab results indicate a medium to high amount of Aspergillus/Penicillium, , and Stachybotrys/Memnoniella (mold) growth on surface
S-2	Spandrel – Near door 28	Backside of purple drywall within wall cavity	**Not Acceptable**	Lab results indicate a high amount of Aspergillus/Penicillium and Stachybotrys/Memnoniella (mold) growth on surface
S-3	Classroom 1200	Drywall behind baseboard	**Not Acceptable**	Lab results indicate a medium to high amount of Cladosporium (mold) growth on surface

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Conclusions and Recommendations

Based on the microbial air sampling, direct surface (tape lift) sampling, moisture measurements, and field observations conducted at Alexandria City High School on January 16, 2026, Atmos Solutions Inc. provides the following conclusions and recommendations.

Accordingly, there is potential for adverse health effects in the affected areas, particularly for sensitive individuals, including those with asthma, allergies, or compromised immune systems, during the time of the assessment and under conditions that may increase exposure. Such conditions may include maintenance or repair activities, removal or disturbance of impacted materials, changes in HVAC air movement or pressure relationships, or continued water intrusion. Corrective actions are therefore recommended to reduce the potential for future airborne exposure and associated health concerns.

1. Moisture Source Investigation and Repair

- Field observations and moisture measurements indicate that active water intrusion within wall assemblies is the primary contributor to mold growth.
- Further investigation is recommended to identify and permanently repair the source of moisture intrusion, which may include plumbing leaks, building envelope deficiencies, or condensation-related moisture accumulation.
- Repairs should be completed prior to replacement of removed building materials to reduce the likelihood of recurrence.

2. Remediation of Impacted Materials and Interstitial Wall Spaces

The IAQ assessment identified unacceptable fungal growth on interior building materials, despite acceptable airborne mold concentrations at the time of sampling. Direct surface sampling confirmed mold amplification associated with moisture-damaged drywall and concealed wall spaces.

Mold remediation is recommended in the following areas where unacceptable surface mold growth and moisture impacts were documented:

- **Spandrel Area (Near Door 28)**
    - Tape lift samples (S-1 and S-2) collected from interior drywall surfaces showed medium to high concentrations of *Aspergillus/Penicillium*, *Chaetomium*, and *Stachybotrys/Memnoniella*, indicating active fungal amplification.
    - Visual observations and moisture measurements confirmed elevated moisture content within wall materials.
- **Classroom 1200**
    - Tape lift sample (S-3) collected from drywall behind the baseboard showed medium to high concentrations of *Cladosporium* consistent with chronic moisture exposure.

  - Visible mold growth and elevated moisture readings were observed behind the baseboard.
- **Inter-Wall Space Between the Spandrel Area, Classroom 1200, and K-Wing Restroom**
  - Due to the continuity of wall assemblies and similar moisture conditions, these concealed areas should be treated as impacted and remediated under the same protocols as the confirmed affected materials.

Although airborne mold concentrations were within acceptable ranges at the time of sampling, the presence of water-indicator fungal species on building materials confirms localized mold growth that warrants corrective action.

Remediation activities should be performed by a qualified mold remediation contractor and conducted in accordance with the U.S. Environmental Protection Agency's *Mold Remediation in Schools and Commercial Buildings* and the American Industrial Hygiene Association's *Recognition, Evaluation, and Control of Indoor Mold*. The recommended remediation scope includes material removal, engineering controls, surface cleaning, and drying and humidity control, as described above.

3. HVAC and Building Systems Considerations

- Although no significant HVAC-related mold amplification was identified during this assessment, HVAC components adjacent to impacted areas should be inspected during remediation activities.
- Any insulation or materials removed near HVAC pathways should be properly sealed and restored to prevent future moisture accumulation and unintended air movement.

4. Post-Remediation Verification (PRV)

Following completion of remediation and moisture control measures, Atmos recommends Post-Remediation Verification (PRV) to confirm the effectiveness of corrective actions.

PRV activities may include:

- Visual inspection of remediated areas and accessible concealed wall cavities
- Verification that moisture levels are within acceptable ranges
- Follow-up microbial air sampling and/or surface sampling, if requested or deemed necessary prior to re-occupancy

5. Ongoing Monitoring and Preventive Measures

To reduce the potential for future mold growth and associated indoor air quality concerns, Atmos recommends the following preventive measures:

- Implement routine inspections of wall assemblies, baseboards, and spandrel areas for early signs of moisture intrusion.
- Maintain indoor relative humidity below 60 percent through proper HVAC operation and maintenance.
- Promptly investigate and repair any future water intrusion events to prevent recurrence of fungal amplification.

Note:

In-House Remediation Activities

If mold remediation activities are performed in-house by school facilities personnel, all work shall be conducted in accordance with applicable U.S. Environmental Protection Agency (EPA) guidance, American Industrial Hygiene Association (AIHA) recommendations, and the IICRC S520 *Standard and Reference Guide for Professional Mold Remediation* for small-scale or localized microbial remediation.

Remediation activities shall be visually documented to verify proper completion. Documentation shall include dated photographs taken before, during, and after remediation that clearly demonstrate affected areas, cleaning or material removal activities, and final post-remediation conditions.

Any EPA-registered antimicrobial or biocidal products used during remediation (e.g., disinfectants or products such as Shockwave®) shall be applied strictly in accordance with manufacturer instructions. Safety Data Sheets (SDS) for all products used shall be maintained on file by the school.

Upon completion of remediation, all affected areas shall be clean, dry, and free of visible mold growth, debris, dust, or moisture staining. Verification of remediation effectiveness shall be based on visual inspection only, unless additional sampling or third-party verification is specifically requested by the school or warranted due to the extent of impacts.

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Atmos Project No: 25-103

Should you have any questions or need any additional information, please feel free to contact the EHS Program Manager at your earliest convenience at lzadeng@atmossolutionsinc.com or (240) 620-7424.

Sincerely,
Atmos Solutions, Inc.







Lian Zadeng, Program Manager	Noel Bustillo, Industrial Hygienist	Ray Guevara Certified Industrial Hygienist

ATTACHMENTS:

1. Laboratory Report and Chain of Custody
2. Photo Log
3. Sample Location Map

ATTACHMENT 1:

Laboratory Report and Chain of Custody

EMSL Analytical, Inc.

10752 & 10768 Baltimore Avenue Beltsville, MD 20705

Tel/Fax: (301) 937-5700 / (301) 937-5701

http://www.EMSL.com / beltsvillelab@emsl.com

EMSL Order: 192600423
Customer ID: ASDC42
Customer PO:
Project ID:

Attention: NOEL BUSTILLO
Atmos Solutions
6856 Eastern Avenue Suite 205
Washington, DC 20012

Project: ALEXANDRIA HS

Phone: (202) 891-6959
Fax:
Collected Date: 01/16/2026
Received Date: 01/16/2026 03:24 PM
Analyzed Date: 01/16/2026 - 01/19/2026

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

Lab Sample Number:	192600423-0001			192600423-0002			192600423-0003		
Client Sample ID:	7884			8680			7920		
Volume (L):	75			75			75		
Sample Location:	SPANDREL (NEAR DOOR 28)			CLASSRM 1200			RESTRM (K-WING)		
Spore Types	**Raw Count†**	**Count/m³**	**% of Total**	**Raw Count†**	**Count/m³**	**% of Total**	**Raw Count†**	**Count/m³**	**% of Total**
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium++	9	400	63.5	2	90	28.1	1	40	22.2
Basidiospores	3	100	15.9	3	100	31.3	2	90	50
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	6.3	1	40	12.5	-	-	-
Curvularia	-	-	-	-	-	-	1	40	22.2
Epicoccum	-	-	-	1	40	12.5	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1	40	6.3	1	10*	3.1	1	10*	5.6
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	3	40*	6.3	-	-	-	-	-	-
Stachybotrys/Memnoniella	1	10*	1.6	1	40	12.5	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	**18**	**630**	**100**	**9**	**320**	**100**	**5**	**180**	**100**
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-	-	2	-

† Due to method stopping rules, extrapolated raw counts are reported in parenthesis.

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

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

Joseph Centifonte

Joe Centifonti, Laboratory Manager
or other Approved Signatory

EMSL Analytical, Inc. 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 Analytical, Inc. EMSL Analytical, Inc. 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. Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%). Background ratings are based on the total area covered by non-fungal particles: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-99%), or 5 (100%; overloaded). 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 >= 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Beltsville, MD AIHA LAP, LLC-EMLAP Accredited #102891

Initial report from: 01/19/2026 11:48 AM

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

EMSL Analytical, Inc.

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EMSL Order: 192600423
Customer ID: ASDC42
Customer PO:
Project ID:

Attention: NOEL BUSTILLO
Atmos Solutions
6856 Eastern Avenue Suite 205
Washington, DC 20012

Project: ALEXANDRIA HS

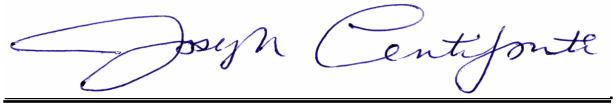
Phone: (202) 891-6959
Fax:
Collected Date: 01/16/2026
Received Date: 01/16/2026 03:24 PM
Analyzed Date: 01/16/2026 - 01/19/2026

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

Lab Sample Number:	**192600423-0004**									
Client Sample ID:	**7962**									
Volume (L):	**75**									
Sample Location:	**EXTERIOR (DOOR 28)**									
Spore Types	**Raw Count†**	**Count/m³**	**% of Total**							
Alternaria (Ulocladium)	-	-	-							
Ascospores	-	-	-							
Aspergillus/Penicillium++	11	480	67.6							
Basidiospores	2	90	12.7							
Bipolaris++	-	-	-							
Chaetomium++	-	-	-							
Cladosporium	2	90	12.7							
Curvularia	-	-	-							
Epicoccum	1	10*	1.4							
Fusarium++	-	-	-							
Ganoderma	-	-	-							
Myxomycetes++	1	40	5.6							
Pithomyces++	-	-	-							
Rust	-	-	-							
Scopulariopsis/Microascus	-	-	-							
Stachybotrys/Memnoniella	-	-	-							
Unidentifiable Spores	-	-	-							
Zygomycetes	-	-	-							
Total Fungi	**17**	**710**	**100**							
Hyphal Fragment	-	-	-							
Insect Fragment	-	-	-							
Pollen	-	-	-							
Analyt. Sensitivity 600x	-	44	-							
Analyt. Sensitivity 300x	-	13*	-							
Skin Fragments (1-4)	-	1	-							
Fibrous Particulate (1-4)	-	1	-							
Background (1-5)	-	1	-							

† Due to method stopping rules, extrapolated raw counts are reported in parenthesis.

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



Joe Centifonti, Laboratory Manager
or other Approved Signatory

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

EMSL Analytical, Inc. 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 Analytical, Inc. EMSL Analytical, Inc. 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. Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%). Background ratings are based on the total area covered by non-fungal particles: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-99%), or 5 (100%; overloaded). 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 >= 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Beltsville, MD AIHA LAP, LLC-EMLAP Accredited #102891

Initial report from: 01/19/2026 11:48 AM

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

EMSL Analytical, Inc.

10752 & 10768 Baltimore Avenue Beltsville, MD 20705
Tel/Fax: (301) 937-5700 / (301) 937-5701
http://www.EMSL.com / beltsvillelab@emsl.com

EMSL Order: 192600423
Customer ID: ASDC42
Customer PO:
Project ID:

Attention: NOEL BUSTILLO
Atmos Solutions
6856 Eastern Avenue Suite 205
Washington, DC 20012

Project: ALEXANDRIA HS

Phone: (470) 384-6283
Fax:
Collected Date: 01/16/2026
Received Date: 01/16/2026
Analyzed Date: 01/19/2026

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Tape Samples (EMSL Method MICRO-SOP-200)

Lab Sample Number:	192600423-0005	192600423-0006	192600423-0007		
Client Sample ID:	S-1	S-2	S-3		
Sample Location:	DRYWALL UNDERLAYMENT (SPANDREL NEAR DOOR 28)	DRYWALL UNDERLAYMENT (SPANDREL NEAR DOOR 28)	CLASSRM 1200 (BEHIND BASEBOARD)		
Spore Types	Category	Category	Category		
Alternaria (Ulocladium)	-	-	-		
Ascospores	-	-	-		
Aspergillus/Penicillium++	Medium	High	-		
Basidiospores	-	-	-		
Bipolaris++	-	-	-		
Chaetomium++	Medium	-	-		
Cladosporium	-	-	*High*		
Curvularia	-	-	-		
Epicoccum	-	-	-		
Fusarium++	-	-	-		
Ganoderma	-	-	-		
Myxomycetes++	-	-	-		
Pithomyces++	-	-	-		
Rust	-	-	-		
Scopulariopsis/Microascus	-	-	Medium		
Stachybotrys/Memnoniella	*High*	*High*	-		
Unidentifiable Spores	-	-	-		
Zygomycetes	-	-	-		
Hyphal Fragment	-	-	-		
Insect Fragment	-	-	Rare		
Pollen	-	-	-		
Fibrous Particulate	Low	Low	Low		

Category: Count/per area analyzed - Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000

- Denotes Not Detected.
++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.
* = Sample contains fruiting structures and/or hyphae associated with the spores.

Joe Centifonti, Laboratory Manager
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.
Samples analyzed by EMSL Analytical, Inc. Beltsville, MD AIHA LAP, LLC-EMLAP Accredited #102891

Initial report from: 01/19/2026 11:48 AM

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

OrderID: 192600423

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Microbiology Chain of Custody Form

EMSL Order Number / Lab Use Only

192600423

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnMicroLab@emsl.com

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization

Customer Information		Billing Information	
Customer ID:		Billing ID:	
Company Name:	Atmos Solutions Inc	Company Name:	Atmos Solutions Inc
Contact Name:	Noel Bustillo	Billing Contact:	Ravindra Jayathilake
Street Address:	6856 Eastern Avenue NW, Suite 205	Street Address:	6856 Eastern Avenue NW, Suite 205
City, State, Zip:	Washington, DC 20012	Country: USA	City, State, Zip: Washington, DC 20012 Country: USA
Phone:	301-543-0644		Phone: (562) 474-5717
Email(s) for Report:	nbustillo@atmossolutionsinc.com		Email(s) for Invoice: rjayathilake@atmossolutionsinc.com

Project Information

Project Name/No: Alexandria HS

Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide)

State Samples Collected: VA

Zip Code Samples Collected:: 22302

State of Connecticut (CT) must select project location. ☐ Commercial (Taxable) ☐ Residential (Non-taxable)

Sampled By Name: Noel Bustillo

Sampled By Signature: Noel B

No. of Samples in Shipment: 7

Sterile, Sodium Thiosulfate Preserved Bottle Used: ☐ Biocide Used in Source (specify)

Public Water Supply Samples: ☐ Note: All results may automatically be reported to DOH if required by State.

Turn-Around-Time (TAT) Please call ahead for large projects and/or turnaround times 6 Hours or Less *32 Hour TAT available for select tests only; samples must be submitted by 11 30am

☐ 3 Hour ☑ 6 Hour ☐ 24 Hour ☐ 32* Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

MICROBIOLOGY TEST CODES

M001 Air-O-Cell	M174 MoldSnap	M012 *Pseudomonas aeruginosa* (P/A***)		M115 Sewage Screen - Water (P/A***)	
M030 Micro 5	M032 Allergenco-D	M024 *Pseudomonas aeruginosa* (MFT*)		M116 Sewage Screen - Water (MPN**)	
M041 Fungal Direct Examination		M015 Heterotrophic Plate Count		M117 Sewage Screen - Swab (P/A***)	
M169 Pollen ID & Enumeration		M017 Total Coliform & *E. Coli* (Colilert P/A***)		M013 Sewage Screen - Swab (MFT*)	
M280 Dust Characterization Level-1		M018 Total Coliform & *E. Coli* (MFT*)		M730 *Methicillin-resistant Staph, aureus* (MRSA)	
M281 Dust Characterization Level-2		M114 Total Coliform & *E. Coli Enumeration (Colilert MPN**)*		M031 Rapid-growing non-TB *Mycobacteria* Detection & Enumeration	
M005 Viable Fungi-Air Samples (Genus ID & Count)		M019 Fecal Coliform (MFT*)			
M006 Viable Fungi-Air Samples (Includes *Penicillum, Aspergillus, Cladosponum, Stachybotrys* Species ID & Count)		M020 Fecal *Streptococcus* (MFT*)		M014 Endotoxin Analysis	
M007 Culturable Fungi-Surface Samples (Genus ID & Count)		M029 *Enterococci* (MFT*)		M044 Group Allergen (Cat, Dog, Cockroach, Dust Mite)	
M008 Culturable Fungi-Surface Samples (Includes *Penicillum, Aspergillus, Cladosporium, Stachybotrys* Species ID & Count)		M129 *Enterococci* (Enterolert P/A***)		M095 Bacteroides	
		M180 Real Time qPCR-ERMI 36 Panel		Other - See Analytical Price Guide for Test Code	
M009 Bacteria Culture Gram Stain & Count		M025 Sewage Screen - Water (MFT*)		*Legionella Analysis* Please use EMSL *Legionella* COC	
M010 Bacteria Count & ID - 3 Most Prominent		*MFT= Membrane Filtration Technique			
M011 Bacteria Count & ID - 5 Most Prominent		**MPN = Most Probable Number			
		***P/A = Presence/Absence			

Sample #	Sample Location/Description	Sample Type (Matrix)	Potable / Non-Potable (Only for Water)	Test Code	Volume/Area	Date / Time Collected	Temperature (Lab Use Only)
Example: Sample 1	Kitchen	Water	Potable	M017	1,000 ml	1/1/2021 3:30pm	
7884	Spandrel (near door 28)	Air		M001	75L	1/16/25	
S-1	Drywall underlayment (spandrel near door 28)	Direct		M041			
S-2	↓	↓		↓			
8680	Classroom 1200	Air		M001	75L		
S-3	↓ (behind bookboard)	Direct		M041			
7920	Restroom (K-wing)	Air		M001	75L		

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

'26 JAN 16 PM 3:24

Method of Shipment: Client Drop-off		Sample Condition Upon Receipt:	
Relinquished by: Noel Bustillo	Date/Time: 1/16/26	Received by:	Date/Time
Relinquished by:	Date/Time.	Received by:	Date/Time

Controlled Document - COC-34 Micro R13 03/02/2021

☑ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

OrderID: 192600423

EMSL ANALYTICAL, INC.
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Microbiology Chain of Custody Form

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077

PHONE: (800) 220-3675
EMAIL: CinnMicroLab@emsl.com

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample #	Sample Location/Description	Sample Type (Matrix)	Potable / Non-Potable (Only for Water)	Test Code	Volume/Area	Date / Time Collected	Temperature (Lab Use Only)
7962	Exterior (Door 28)	Air		M001	75L	↓	

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time:	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

Controlled Document - COC-34 Micro R13 3/02/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

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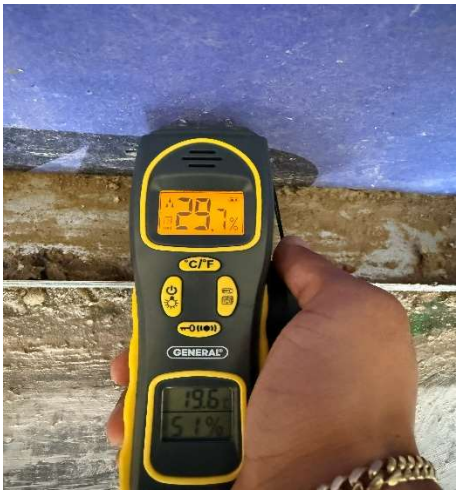
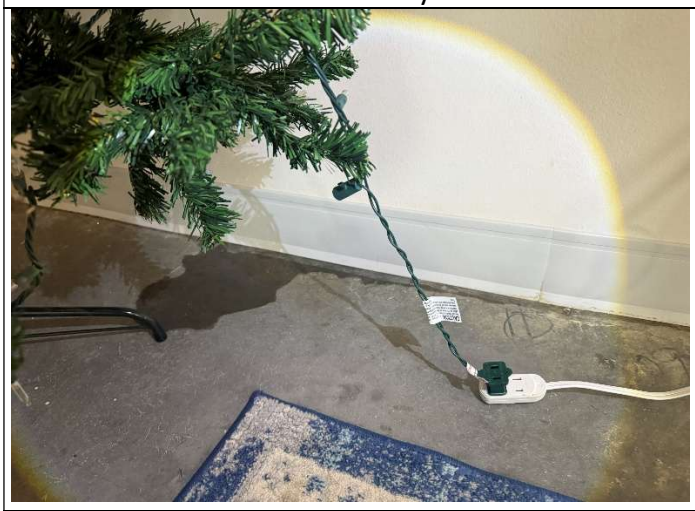
ATTACHMENT 2:

Photo Log

1. Spandrel Near Door 28 – Active water intrusion from behind the drywall.	**2.** Spandrel Near Door 28 – Visible mold observed from inner drywall.
	

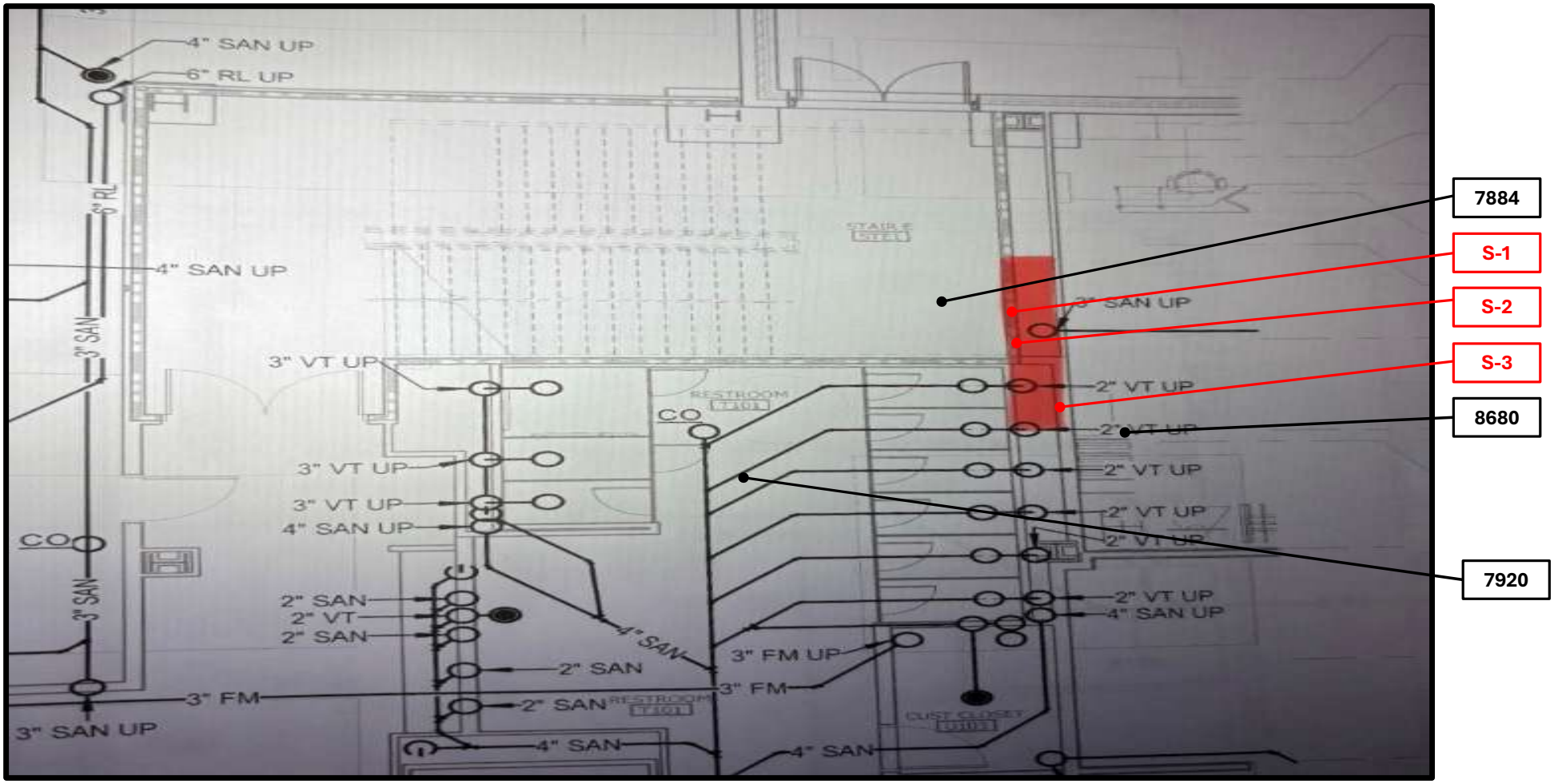
3. Spandrel Near Door 28 – Visible mold observed from inner drywall.	**4.** Spandrel Near Door 28 – Moisture detected on lower drywall.
	

5. Classroom 1200 - Active water intrusion from behind the drywall.	**6.** Classroom 1200 - Visable mold was observed on drywall behind basebord.
	

7. Classroom 1200 – Visable moisture was observed on lower portion of drywall.	**8.** Classroom 1200 – Moisture was detected on lower drywall.
	

ATTACHMENT 3:

Sample Location Map



Acceptable ● Not Acceptable ●	Atmos Solutions Inc. 6856 Eastern Avenue, Suite 205 | Washington, DC 20012 | 202.891.6959	PROJECT NAME: Alexandria City High School 3775 W Braddock Rd Alexandria, VA 22302	DRAWN BY: N. Bustillo	DATE: 01-21-26	DRAWING NO: 01
		TITLE: Sample Location Map – IAQ Assessment	PROJECT MGR.: L. Zadeng	PROJECT NO: 25-103-01	

Note: All locations are approximate and not drawn to scale and must be field verified