March 8, 2021

Mr. Alex Baylor via email: alex.baylor@pgcps.org
Environmental Specialist
Environmental Safety Office
Prince George's County Public Schools
Division of Supporting Services / Building Services
13306 Old Marlboro Pike
Upper Marlboro, MD 20772

RE: Indoor Air Quality (IAQ) and Mold Assessment Services
Prince George's County Public Schools (PGCPS) – Fairmont Heights High School
6501 Columbia Park Road, Landover, Maryland 20785
Contract No.: IFB 022-19: Indoor Air Quality Services at Various Locations
Tidewater Project No.: 5419-047

Dear Mr. Baylor:

Tidewater, Inc. (Tidewater) is pleased to present this final report regarding the results of the Indoor Air Quality (IAQ) and Mold Assessment Services conducted by Tidewater at Fairmont Heights High School located at 6501 Columbia Park Road in Landover, Maryland. Tidewater's Project Manager and Certified Industrial Hygienist, Mr. Skanda Abeyesekere MS, CIH, CSP, CHMM conducted these services on January 27, 2021.

The scope of work for the IAQ assessment and mold survey included:

- Inspecting, taking direct read measurements and conducting air sampling at the following select areas of the school: Media Center, Health Center, Room B124 (Vice President /Admin), Room A135, Room D105 (Health Classroom), Cafeteria, Biology Laboratory B219, Room C211, Room A205 and the Teacher's Lounge. These areas were inspected for evidence of potential indoor air quality problems (including suspect microbial growth, water damage, chemical use/ storage, drain traps, sources of allergens/ contaminants, etc.) that may contribute to indoor air quality problems;
- Taking direct read air measurements for comfort parameters including temperature (T), relative humidity (RH), carbon dioxide (CO_2), and carbon monoxide (CO) for comparison with standards established by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 62.1–2019, *Ventilation for Acceptable Indoor Air Quality*, and The United States Environmental Protection Agency (US EPA) National Ambient Air Quality Standards (NAAQS);
- Taking direct read measurements for Particulate Matter less than 10 microns (PM10) for comparison with standards established by the US EPA NAAQS Final Action (December 7, 2020); and
- Air sampling for microbial spores in the above locations for total airborne fungal spore analysis.

Visual Observation

The school building was occupied by a limited number of staff, and no students were present at the time of the survey because of the on-going COVID-19 pandemic. The majority of the classrooms and other common areas inspected were vacant. The results of Tidewater's visual inspection are presented below:

Media Center

The air conditioning system was turned on and was emitting cold air from the ceiling-mounted supply air vents at the time of the inspection. The ceiling mounted supply and return air grills appeared to be clean. No signs of ongoing water-intrusion problems or mold growth were observed. Furthermore, no notable odors were detected. The Media Center was clean and well maintained. Housekeeping was satisfactory.

Health Center (waiting Area)

No suspect mold growth nor notable odors were detected. One (1) wall-mounted fan coil unit was operating and was emitting warm air at the time of the inspection. The waiting area appeared to be clean and well maintained. Housekeeping appeared to be satisfactory.

Room B124 (VP/ Admin Office)

No signs of ongoing water-intrusion problems or suspect mold growth were observed. Furthermore, no notable odors were detected. The ceiling-mounted supply and return air grills appeared to be clean. The Room was clean and well maintained. Housekeeping was satisfactory.

Room A135 (Classroom/CRI)

No signs of ongoing water-intrusion problems or suspect mold growth were observed. Furthermore, no notable odors were detected. The ceiling-mounted supply and return air grills appeared to be clean. The Room was clean and well maintained. Housekeeping was satisfactory.

Room D105 (Health Classroom)

No suspect mold growth nor notable odors were detected. The ceiling-mounted supply and return air grills appeared to be clean and free of dust. The Room was clean and well maintained. Housekeeping was satisfactory.

Cafeteria

No signs of ongoing water-intrusion problems or suspect mold growth were observed in the cafeteria. Furthermore, no notable odors were detected. The ceiling-mounted supply grills were clean. A ceiling-mounted return air grill located at the entrance to the cafeteria contained dust and grime accumulation. The cafeteria was clean and well maintained. Housekeeping was satisfactory.

Room B219 (Biology Lab)

No signs of ongoing water-intrusion problems or suspect mold growth were observed. Furthermore, no notable odors were detected. The ceiling-mounted supply and return air grills appeared to be clean. The Biology Lab was clean and well maintained. Housekeeping was satisfactory.

Room C211

No suspect mold growth nor notable odors were detected. The ceiling-mounted supply and return air grills appeared to be clean. Room C211 was clean and well maintained.

Room A205

No signs of ongoing water-intrusion problems or suspect mold growth were observed. Furthermore, no notable odors were detected. The ceiling-mounted supply and return air grills appeared to be clean. Room A205 was clean and well maintained. Housekeeping was satisfactory.

Teacher's Lounge

No suspect mold growth nor notable odors were detected. The ceiling-mounted supply and return air grills appeared to be clean. Housekeeping was satisfactory.

Comfort Parameter Air Testing

During the IAQ assessment, Tidewater obtained temperature (T), relative humidity (RH), carbon dioxide (CO_2), and carbon monoxide (CO) measurements within select locations using a TSI VelociCalc Indoor Air Quality instrument (Model Number 9565-X, Serial Number 9565X 1945 002, Calibration Date: November 8, 2019.) Measurements were taken after allowing the instrument to become acclimated to the ambient temperature and relative humidity for approximately five (5) minutes. Measurements were taken over a 5-minute time period at each designated location and the average concentration was recorded. Samples were obtained for comparison with standards established by the American Society for Heating Refrigeration and Air Conditioning (ASHRAE) Standard 62.1 – 2019, *Ventilation for Acceptable Indoor Air Quality*. Tidewater also obtained an "outdoors background" [Exterior] measurement in front of the main entrance of the school building for comparison to the interior readings. The results of the IAQ comfort parameter monitoring are provided in Table 1, in **Attachment A.**

According to the American Society for Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Standard 62.1 – 2019, *Ventilation for Acceptable Indoor Air Quality,* the temperature range in summer months should be maintained between 73.0°F and 79.0°F for maximum occupant comfort. The ASHRAE standard for temperature for winter months is between 68.0°F and 74.5°F. The indoor temperature levels within the assessed areas on January 27, 2021 ranged between 67.8°F and 70.3°F. The background temperature outside the building was 51.7°F. The temperature levels recorded within all area monitored were within the temperature standard of 68.0°F and 74.5°F recommended by ASHRAE for winter months. Most areas inspected were vacant at the time of the inspection. Indoor temperature levels fluctuate with the number of occupants present within the work area.

Per the same ASHRAE standard, a maximum relative humidity level of 65.0% or below is recommended to reduce the likelihood of condensation on cold surfaces. Relative humidity levels within the assessed areas on January 27, 2021 ranged between 21.1% and 24.9%. The background relative humidity level outside the building was 21.0%. The relative humidity levels in all areas assessed were below the ASHRAE recommended maximum relative humidity standard of 65.0%.

ASHRAE Standard 62.1 – 2019 recommends that indoor CO_2 levels not exceed 700 ppm above the outdoor background CO_2 level. The CO_2 levels in the assessed areas on January 27, 2021

ranged between 440 ppm and 458 ppm. The background CO_2 level outside the building was 442 ppm. The CO_2 levels within all interior locations assessed did not exceed 700 ppm above the outdoor background CO_2 level of 442 ppm.

The CO levels in all areas assessed on January 27, 2021 were below the maximum standard of 9.0 ppm recommended by the Indoor Air Quality Association (IAQA) for CO in occupied indoor environments.

Particulate Matter Less Than 10 microns (PM10)

During the assessment, Tidewater obtained particulate matter less than 10 microns (PM10) dust particulate measurements within select locations using a TSI® DUST TRAK II™ Aerosol Monitor (Model 8534, Serial Number 8534170101.) Measurements were taken after allowing the device to become acclimated to the ambient temperature and relative humidity for five (5) minutes. Measurements were taken over a 5-minute time period at each sampling location and the average concentration was recorded for comparison with standards established by the US EPA NAAQS Final Action (December 7, 2020.)

Tidewater also obtained a background exterior sample near front of the main entrance of the school building for comparison to the interior readings.

The results of the particulate matter sampling are provided in Table 2, in **Attachment A**.

Based on the EPA NAAQS for Particulate Matter, Final Action (December 7, 2020), the 24-hour primary and secondary exposure standard for particulate matter less than 10 microns (PM10) is 150.0 micrograms per cubic meter of air (µg/m^3) or 0.150 milligrams per cubic meter of air (mg/m^3.) The results of the PM10 analysis indicate that the average PM10 dust concentrations in all assessed areas ranged between 0.001 mg/m^3 and 0.038 mg/m^3. The average PM10 dust concentration in the background sample obtained outside the building was 0.003 mg/m^3. The PM10 concentrations in all areas assessed were below the EPA 24-hour primary and secondary NAAQS of 0.150 mg/m^3.

Spore Trap Bioaerosol Sampling

Tidewater collected spore trap air samples from the same locations where the comfort parameters were recorded. Tidewater obtained the spore trap samples using Allergenco-D cassettes affixed to a Buck BioAire™ Bioaerosol Sampling Pump (Pump Model Number B520 and Serial Number B153043) calibrated to a flow rate of 15.0 Liters per minute. Each sample was run for a period of five (5) minutes to collect a total sample volume of 75.0 liters of air. Tidewater also obtained an outdoor background sample in front of the main entrance of the school building for comparison to the interior readings. Tidewater also obtained a background exterior sample near front of the main entrance of the school building for comparison to the interior readings.

Once collected, the samples were transported to EMSL Analytical Laboratory (EMSL) located in Beltsville, Maryland for analysis via a standard turn-around time. The samples were transported following rigorous chain-of-custody guidelines to ensure proper handling and delivery of the samples. EMSL is accredited in the American Industrial Hygiene Association (AIHA) Environmental Microbiology Laboratory Accreditation Program (EMLAP) and is a successful participant in AIHA's Environmental Microbiology Proficiency Analytical Testing (EMPAT) program (Laboratory Number 102891.) The samples were analyzed via light microscopy at the standardized magnification of 600X. This technique does not allow for the differentiation between

Aspergillus and *Penicillium* spores because they are morphologically identical. Additionally, the technique does not allow for cultivation, or the identification of spores to the species level, except in a few cases.

There are no universally accepted federal or State of Maryland standards for acceptable airborne concentrations of bioaerosols in an indoor occupational environment. In general, indoor airborne concentrations should be less than that found in the outdoor air, with similar species composition. Indoor spore counts significantly greater than those identified in the outdoors environment, or the presence of large numbers of different types of spores identified in indoor versus the outdoor environments, may indicate contamination and potential indoor air quality problems.

The total mold spore counts in all assessed areas of the school ranged between "None Detect" and 180 spores/m^3. The total mold spore concentration in the background sample was 160 spores/m^3. The total mold spore concentrations in all interior samples (apart from sample FHHS-5) were significantly below the total mold spore concentration of the background sample (FHHS-BG.) The total mold spore concentration in sample FHHS-5 marginally exceeded the background sample concentration.

Additionally, the fungal species observed in the interior samples were consistent with those observed in the background sample, and no significant concentrations of an individual fungal species were identified in the interior samples. These results do not indicate elevated levels of airborne total fungal spores in the interior locations sampled, nor suggest the presence of potential significant sources of indoor fungi in the interior locations sampled.

The summary of the results for the spore trap sampling are provided in Table 3 in **Attachment A**. The laboratory analytical results, including speciation and chain of custody forms for the spore trap samples are included in **Attachment B**.

CONCLUSIONS

- The follow issue was identified during the visual inspections:
  - The ceiling-mounted return air grill located at the entrance to the cafeteria contained dust and grime accumulation.
- The Temperature, Relative Humidity, CO_2, CO readings and particulate matter less than 10 microns (PM10) recorded within the assessed areas were within industry standards and guidelines.
- The total mold spore concentrations in all interior locations sampled (except sample FHHS-5) were below the background sample concentration and were also consistent with those observed in the background sample. The results do not indicate elevated levels of airborne total fungal spores in the interior locations sampled.

RECOMMENDATIONS

Based on the results of our visual inspection, Tidewater proposes the following:

- The following area should be cleaned with a commercially available (EPA approved) disinfectant on a routine basis to remove dust and grime buildup.
  - The ceiling-mounted return air grill located at the entrance to the cafeteria

- Ensure the Heating Ventilation and Air Conditioning (HVAC) System supplying air to all common areas and classrooms is properly balanced per design requirements and are turned on and are operating at all times to ensure adequate ventilation throughout the classrooms and common areas before the school re-opens.
- Maintain good housekeeping practices in all common areas and classrooms. All common area and classrooms floors should be broom cleaned at the end of each day once the school re-opens for students. Furthermore, all horizontal surfaces including desktops, furniture, window sills, and light fixtures should be cleaned on a routine basis to prevent the accumulation of dust.

Qualifications

Tidewater endeavored to investigate existing conditions in select areas of Fairmont Heights High School located at 6501 Columbia Park Road, in Landover, Maryland as they pertain to indoor air quality and mold contamination. Our conclusions and recommendations are based on observations made on the day of our assessment, laboratory data from the time of the assessment, and information provided by both our Client and the area occupants. Actual conditions vary from day to day throughout the year.

Tidewater appreciates the opportunity to provide Industrial Hygiene consulting services for Prince George's County Public Schools. Please contact us should any questions arise concerning this report or if we may be of further assistance.

Sincerely,

Tidewater, Inc.

Skanda Abeyesekere, MS, CIH, CSP, CHMM
Project Manager

Jonathan N. Schatz, MS
Manager, IH Services

SA/JNS

Attachments: **Attachment A – Summary of Comfort Parameters, PM10 Particulate Dust, and Microbial Results**
Attachment B – Laboratory Reports and Chain of Custody Forms
Attachment C – Instrument Calibration Certificates
Attachment D – Relevant Certifications
Attachment E – Floor Plan with Sampling Locations

APPENDIX A

COMFORT PARAMETERS, PM10 PARTICULATE DUST, AND MICROBIAL RESULTS

Table 1: Indoor Air Quality Comfort Parameters Fairmont Heights High School				
Location	**Temperature (°F)**	**Carbon Dioxide (ppm)**	**Relative Humidity (%)**	**Carbon Monoxide (ppm)**
January 27, 2021				
Media Center	69.3	24.2	458	0.0
Health Center (waiting Area)	67.8	22.4	455	0.0
Room B124 (VP/ Admin Office)	68.4	24.9	449	0.0
Room A135 (Classroom/CRI)	69.4	22.4	441	0.0
Room D105 (Health Classroom)	69.8	22.4	446	0.0
Cafeteria	70.3	21.1	440	0.0
Room B219 (Biology Lab)	69.4	23.5	449	0.0
C211 Classroom	68.8	23.6	445	0.0
A205 Classroom	69.2	23.1	457	0.0
Teacher Lounge	69.1	22.8	456	0.0
Background (Outdoors)	51.7	21.0	442	0.0

Table 2: Particulate Matter Less than 10 Microns (PM10) Fairmont Heights High School	
Location	**Particulate Matter (PM10)** **Concentration (mg/m^3)**
January 27, 2021	
Media Center	0.038
Health Center (waiting Area)	0.004
Room B124 (VP/ Admin Office)	0.001
Room A135 (Classroom/CRI)	0.004
Room D105 (Health Classroom)	0.002
Cafeteria	0.003
Room B219 (Biology Lab)	0.003
C211 Classroom	0.002
A205 Classroom	0.002
Teacher Lounge	0.006
Background (Outdoors)	0.003

Table 3: Spore Trap Sampling Results Fairmont Heights High School				
January 27, 2021				
Sample Number	**Sample Location**	**Sample Volume (L)**	***Aspergillus Penicillium* Concentration (Counts/m^3)**	**Total Fungi Concentration (Counts/m^3)**
FHHS-1	Media Center	75.0	None Detected	None Detected
FHHS-2	Health Center (waiting Area)	75.0	None Detected	None Detected
FHHS-3	Room B124 (VP/ Admin Office)	75.0	None Detected	40
FHHS-4	Room A135 (Classroom/CRI)	75.0	None Detected	40
FHHS-5	Room D105 (Health Classroom)	75.0	80	180
FHHS-6	Cafeteria	75.0	None Detected	None Detected
FHHS-7	Room B219 (Biology Lab)	75.0	40	40
FHHS-8	C211 Classroom	75.0	None Detected	40
FHHS-9	A205 Classroom	75.0	40	80
FHHS-10	Teacher Lounge	75.0	None Detected	40
FHHS-BG	Background (Outdoors)	75.0	None detected	160

APPENDIX B

LABORATORY REPORTS AND CHAIN OF CUSTODY FORMS

EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-0262
http://www.EMSL.com / cinnmicrolab@emsl.com

EMSL Order: 372101670
Customer ID: TIDE50
Customer PO:
Project ID:

Attention: Skanda Abeyeskere
Tidewater, Inc.
6625 Selnick Drive
Suite A
Elkridge, MD 21075
Project: Fairmont Heights HS

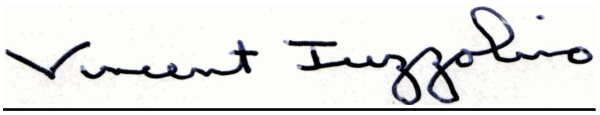
Phone: (410) 540-8700
Fax: (410) 997-8713
Collected Date: 01/27/2021
Received Date: 02/01/2021
Analyzed Date: 02/12/2021

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

Lab Sample Number:	372101670-0001			372101670-0002			372101670-0003		
Client Sample ID:	FHHS-1			FHHS-2			FHHS-3		
Volume (L):	75			75			75		
Sample Location:	Media Center			Health Center			B124-VP		
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	-	-	-	-	-	-	-	-	-
Basidiospores	-	-	-	-	-	-	1	40	100
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	-	None Detected	-	-	None Detected	-	**1**	**40**	**100**
Hyphal Fragment	1	40	-	-	-	-	-	-	-
Insect Fragment	-	-	-	2	80	-	-	-	-
Pollen	-	-	-	1	40	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ 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.



Vincent Iuzzolino, M.S., Laboratory Director
or other Approved Signatory

High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-EMLAP Accredited #100194

Initial report from: 02/12/2021 11:44 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: 372101670
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Project: Fairmont Heights HS

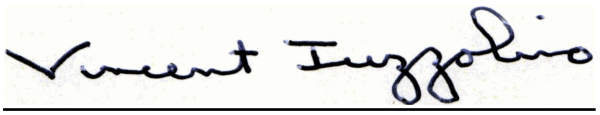
Phone: (410) 540-8700
Fax: (410) 997-8713
Collected Date: 01/27/2021
Received Date: 02/01/2021
Analyzed Date: 02/12/2021

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

Lab Sample Number:	372101670-0004			372101670-0005			372101670-0006		
Client Sample ID:	FHHS-4			FHHS-5			FHHS-6		
Volume (L):	75			75			75		
Sample Location:	Room A-135			Room D105 Heath			Multipurpose Room		
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	-	-	-	2	80	44.4	-	-	-
Basidiospores	1	40	100	-	-	-	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	3	100	55.6	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	**1**	**40**	**100**	**5**	**180**	**100**	**-**	**None Detected**	**-**
Hyphal Fragment	-	-	-	1	40	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ 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.



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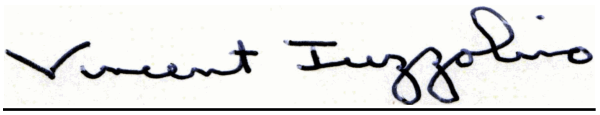
Test Report: Allergenco-D(™) Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	372101670-0007			372101670-0008			372101670-0009		
Client Sample ID:	FHHS-7			FHHS-8			FHHS-9		
Volume (L):	75			75			75		
Sample Location:	2nd Fl B-219			2nd Fl C-211			2nd Fl A-205		
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	1	40	100	-	-	-	1	40	50
Basidiospores	-	-	-	-	-	-	1	40	50
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	1	40	100	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	**1**	**40**	**100**	**1**	**40**	**100**	**2**	**80**	**100**
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ 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.



Vincent Iuzzolino, M.S., Laboratory Director
or other Approved Signatory

High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-EMLAP Accredited #100194

Initial report from: 02/12/2021 11:44 AM

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

EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-0262
http://www.EMSL.com / cinnmicrolab@emsl.com

EMSL Order: 372101670
Customer ID: TIDE50
Customer PO:
Project ID:

Attention: Skanda Abeyeskere
Tidewater, Inc.
6625 Selnick Drive
Suite A
Elkridge, MD 21075
Project: Fairmont Heights HS

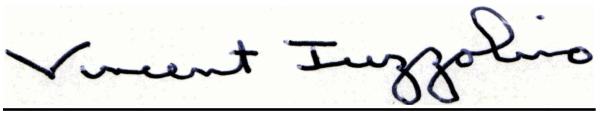
Phone: (410) 540-8700
Fax: (410) 997-8713
Collected Date: 01/27/2021
Received Date: 02/01/2021
Analyzed Date: 02/12/2021

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

Lab Sample Number:	372101670-0010			372101670-0011		
Client Sample ID:	FHHS-10			FHHS-BG		
Volume (L):	75			75		
Sample Location:	A211 - Teachers Lounge			Background		
Spore Types	**Raw Count**	**Count/m³**	**% of Total**	**Raw Count**	**Count/m³**	**% of Total**
Alternaria (Ulocladium)	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-
Basidiospores	1	40	100	2	80	50
Bipolaris++	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-
Cladosporium	-	-	-	2	80	50
Curvularia	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-
Rust	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-
Total Fungi	**1**	**40**	**100**	**4**	**160**	**100**
Hyphal Fragment	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-
Pollen	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-

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

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



Vincent Iuzzolino, M.S., Laboratory Director
or other Approved Signatory

High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-EMLAP Accredited #100194

Initial report from: 02/12/2021 11:44 AM

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

OrderID: 372101670

Microbiology Chain of Custody

RECEIVED EMSL CINNAMINSON, NJ 2021 FEB -1 A 11:57

EMSL Order Number (Lab Use Only): 372101670

PHONE:

FAX:

Company: Tidewater Inc	**EMSL-Bill to:** ☐ Different ☐ Same If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 6625 Selnick Drive, Suite A	
City: Elkridge **State/Province:** MD	**Zip/Postal Code:** **Country:**
Report To (Name): Skanda Abeyesekere	**Telephone #:**
Email Address: skanda@tideh2o.net	**Fax #:** **Purchase Order:**
Project Name/Number: Fairmont Heights HS.	**Please Provide Results:** ☐ FAX ☐ E-mail ☐ Mail
U.S. State Samples Taken: Maryland	**Connecticut Samples:** ☐ Commercial ☐ Residential

Turnaround Time (TAT) Options* - Please Check

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

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

Non Culturable Air Samples (Spore Traps) – Test Codes

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

Other Microbiology Test Codes

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

Preservation Method (Water):

Name of Sampler: Skanda Abeyesekere **Signature of Sampler:** Skanda Abeyesekere

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
Example: A1	Kitchen	Air	M001	75L	1/1/12 4:00 PM
FHHS-1	Media Center	Air	M032	75.0	01/27/21
-2	Health center				
B124-VP3	B124-VP				
-4	Room A-135				
-5	Room D105 Health				
-6	Multipurpose room.				
-7	2nd fl. ↓ B-219				
-8	2nd fl - C-211				
-9	" - A-205				

Client Sample # (s): - **Total # of Samples:** 11 11

Relinquished (Client): Skanda Abeyesekere **Date:** 01/27/21 **Time:** 3:30 pm.

Received (Client): L. Fairmont Drop Box **Date:** 1/29/21 **Time:** 2:50 pm

Comments: Chelsea FX 2/1/21 9a

OrderID: 372101670

RECEIVED
EMSL
CINNAMINSON, NJ

Microbiology Chain of Custody

EMSL Order Number *(Lab Use Only)*: 372101670 FEB -1 A 11: 51

PHONE:
FAX:

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

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
FHHS-10	4211 – Teachers Lounge	Air	M032	75.0	01/27/21
FHHS-BG	Background				

**Comments/Special Instructions:

Page 2 of 2 pages

APPENDIX C

INSTRUMENT CALIBRATION CERTIFICATES

TSI P/N 2300157

CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

ENVIRONMENT CONDITIONS		
TEMPERATURE	74.1 (23.4)	°F (°C)
RELATIVE HUMIDITY	26	%RH
BAROMETRIC PRESSURE	29.26 (990.9)	inHg (hPa)

MODEL	9565-X
SERIAL NUMBER	9565X1945002

☒ AS LEFT ☒ IN TOLERANCE
☐ AS FOUND ☐ OUT OF TOLERANCE

-- CALIBRATION VERIFICATION RESULTS --

THERMO COUPLE^ — **SYSTEM PRESSURE01-01** — *Unit: °F (°C)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	71.6 (22.0)	71.6 (22.0)	69.6~73.6 (20.9~23.1)				

BAROMETRIC PRESSURE — **SYSTEM PRESSURE01-01** — *Unit: inHg (hPa)*

#	STANDARD	MEASURED	ALLOWABLE RANGE	#	STANDARD	MEASURED	ALLOWABLE RANGE
1	29.26 (990.9)	29.26 (990.9)	28.67~29.85 (970.9~1010.8)				

^ *Circuit portion of temperature measurement only, not including probe.*

TSI does hereby certify that the above described instrument conforms to the original manufacturer's specification (not applicable to As Found data) and has been calibrated using standards whose accuracies are traceable to the United States National Institute of Standards and Technology (NIST) or has been verified with respect to instrumentation whose accuracy is traceable to NIST, or is derived from accepted values of physical constants. TSI's calibration system is registered to ISO-9001:2015

Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
DC Voltage	E003299	06-06-19	12-31-20	DC Voltage	E003300	06-06-19	12-31-20
Temperature	E004626	01-09-19	01-31-20	Pressure	E003302	08-07-19	02-29-20
Pressure	E003303	08-26-19	02-29-20				

Rose Germain — CALIBRATED

November 8, 2019 — DATE

Doc. ID CERT_GEN_WCC_TM

TSI P/N 2300157

CERTIFICATE OF CALIBRATION AND TESTING

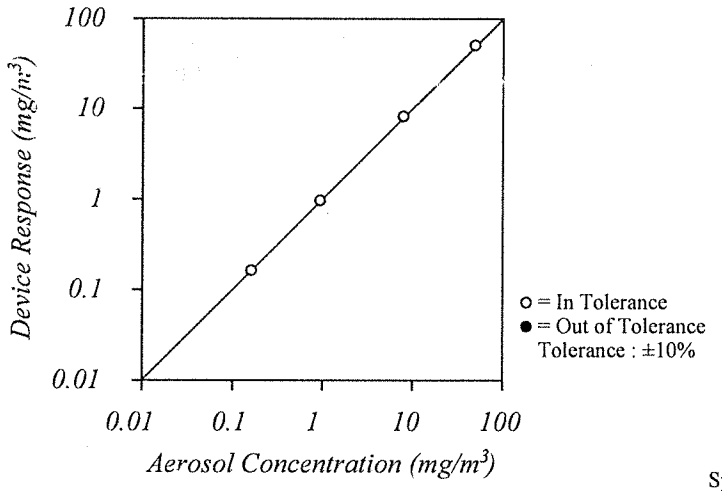
TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA
Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 http://www.tsi.com

Environment Conditions		
Temperature	75.83 (24.4)	°F (°C)
Relative Humidity	43.6	%RH
Barometric Pressure	28.93 (979.7)	inHg (hPa)

Model	**8534**
Serial Number	**8534170101**

☒ As Left ☒ In Tolerance
☐ As Found ☐ Out of Tolerance

Concentration Linearity Plot



System ID: DTII01-02

FLOW AND PRESSURE VERIFICATION — SYSTEM DTII01-01

Parameter	Standard	Measured	Allowable Range	Parameter	Standard	Measured	Allowable Range
Flow lpm	3.00	3.03	2.88 ~ 3.12	Pressure kPa	97.8	97.8	92.95 ~ 102.73
Full Flow lpm	N/A	4.54	>3.80				

TSI Incorporated does hereby certify that all materials, components, and workmanship used in the manufacture of this equipment are in strict accordance with the applicable specifications agreed upon by TSI and the customer and with all published specifications. All performance and acceptance tests required under this contract were successfully conducted according to required specifications. There is no NIST standard for optical mass measurements. Calibration of this instrument performed by TSI has been done using emery oil and has been nominally adjusted to respirable mass per standard ISO 12103-1, A1 test dust (Arizona dust). Our calibration ratio is greater than 1.2:1

Measurement Variable	System ID	Last Cal.	Cal. Due
DC Voltage	E003314	01-15-20	01-31-21
Microbalance	M001324	10-03-18	10-31-20
3 um PSL	221853	n/a	n/a
Pressure	E003511	10-04-19	10-31-20
DC Voltage	E003315	01-15-20	01-31-21
Flowmeter	E005922	06-29-20	06-30-21
Microbalance	M001324	10-03-18	10-31-20
1 um PSL	698880	n/a	n/a
10 um PSL	212455	n/a	n/a

Measurement Variable	System ID	Last Cal.	Cal. Due
Photometer	E005612	08-19-20	02-28-21
1 um PSL	698880	n/a	n/a
10 um PSL	212455	n/a	n/a
Flowmeter	E005140	01-09-20	01-31-21
Photometer	E003433	09-15-20	03-31-21
DC Voltage(Keithley)	E002859	06-15-20	06-30-21
Pressure	E005651	07-06-20	07-31-21
3 um PSL	206030	n/a	n/a

David Farrell

Calibrated

September 24, 2020

Date

Certificate of Conformance

(X) Buck BioAire™ ( ) Buck BioSlide™

Serial number: B153043 **Date Issued:** 3-18-20

Flow Calibration

The instrument listed above is in conformance with factory specifications and the flow is set to nominal using a BUCK Calibrator which is N.I.S.T. traceable to A. P. Buck, Inc. Calibration Procedure APB-1, Ver. 6.2.

QA APPROVAL BY: Thomas J. Cravener

A.P. BUCK, INC.
7101 Presidents Drive, Suite 110
Orlando, FL 32809
Phone: 407-851-8602 • Fax: 407-851-8910

BUCK
A.P. BUCK, INC.

APPENDIX D

RELEVANT CERTIFICATIONS

ABIH®

american board of industrial hygiene®

organized to improve the practice of industrial hygiene
proclaims that

Skandakumar Harshanath Abeyesekere

having met all requirements of
education, experience and examination, and
ongoing maintenance,
is hereby certified in the

COMPREHENSIVE PRACTICE
of
INDUSTRIAL HYGIENE

and has the right to use the designations

CERTIFIED INDUSTRIAL HYGIENIST

CIH®

Certificate Number	**9928 CP**
Awarded:	**May 11, 2011**
Expiration Date:	**December 1, 2021**

Susan Ripple
Chair, ABIH

Chief Executive Officer, ABIH

BOARD OF CERTIFIED SAFETY PROFESSIONALS

affirms that

Skandakumar Abeyesekere

Has applied for, met qualifications, and passed required examination(s) and is hereby authorized to use the designation

Certified Safety Professional®

in Comprehensive Practice

So long as this certificate is not suspended or revoked and the certificant renews this authorization annually and meets Continuance of Certification requirements.

Board of Examiners in witness whereof we have here unto set our hands and affixed the Seal of the Board this 7th Day of April, 2008

Paul S Adams — President

Linda Tapp — Secretary

20110 — CSP No.

INSTITUTE OF HAZARDOUS MATERIALS MANAGEMENT

THIS CERTIFIES THAT

Skandakumar Abeyeskere

HAS SUCCESSFULLY MET ALL THE REQUIREMENTS OF EDUCATION, EXPERIENCE AND EXAMINATION, AND IS HEREBY DESIGNATED A

CERTIFIED HAZARDOUS MATERIALS MANAGER
CHMM

INSTITUTE OF HAZARDOUS MATERIALS MANAGEMENT IHMM CORPORATE SEAL 1984 DISTRICT OF COLUMBIA

May 13, 2016
DATE OF CERTIFICATION

19053
CREDENTIAL NUMBER

May 31, 2021
CERTIFICATION EXPIRES

M. Patricia Buley
ACTING EXECUTIVE DIRECTOR

VALID SO LONG AS THIS CREDENTIAL IS RENEWED ACCORDING TO SCHEDULE AND IS NOT OTHERWISE REVOKED.

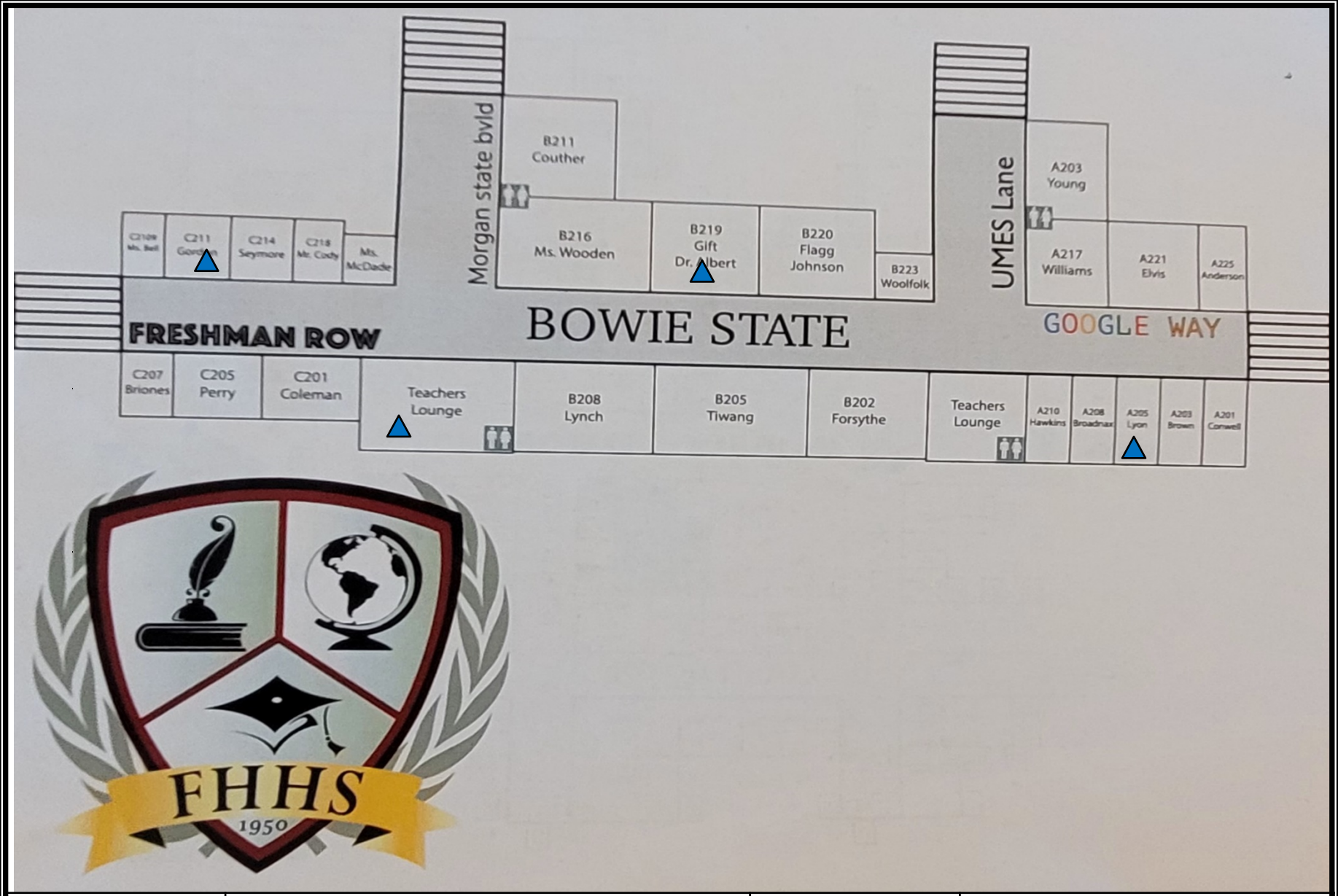
ANSI Accredited Program PERSONNEL CERTIFICATION

Accredited by the American National Standards Institute and the Council of Engineering and Scientific Specialty Boards

APPENDIX E

FLOOR PLAN WITH SAMPLING LOCATIONS

TIDEWATER INC	**Attachment C** **Fairmont Heights High School** **Floor Plan with Sampling Locations**	Scale: N/A Project #: 5419 - 047 Date: January 27, 2021	**General Notes** ▲ = Sample Location



TIDEWATER INC	**Attachment C** **Fairmont Heights High School** **Floor Plan with Sampling Locations**	Scale: N/A Project #: 5419 - 047 Date: January 27, 2021	**General Notes** ▲ = Sample Location