



July 3, 2019

Mr. Alex Baylor, Environmental Specialist
Environmental Safety Office
Prince Georges County Public Schools
Division of Supporting Services / Building Services
13306 Old Marlboro Pike
Upper Marlboro, MD 20772

via email: alex.baylor@pgcps.org

**RE: Indoor Air Quality (IAQ) and Mold Assessment Services
Lamont Elementary School
7101 Good Luck Road, New Carrollton, MD 20784
Tidewater Project No.: 5419-007**

Dear Mr. Baylor:

Tidewater, Inc. (Tidewater) is pleased to present this Indoor Air Quality (IAQ) and Mold Assessment Report describing the results of the IAQ assessment and mold survey conducted by Tidewater at Lamont Elementary School located at 7101 Good Luck Road, New Carrollton, Maryland. The IAQ and Mold survey was conducted on May 24, 2019, by Tidewater's Project Manager and Certified Industrial Hygienist, Mr. Skanda Abeyesekere MS, CIH, CSP, CHMM.

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

- Visual inspections of the following representative areas of the school: Multipurpose Room, Library, Classroom 4, Classroom 6, Classroom 9, Classroom 16, Physical Education Room, Classroom 28, Reading Room and Classroom T2 of Lamont Elementary School 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.
- Comfort parameter air testing at the above areas utilizing a direct-reading IAQ monitor for temperature (T), relative humidity (RH), carbon monoxide (CO), and carbon dioxide (CO₂). Measurements were taken for comparison with guidelines established by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 62.1–2016, Ventilation for Acceptable Indoor Air Quality, and The United States Environmental Protection Agency (US EPA) National Ambient Air Quality Standards (NAAQS.)
- Measurement of particulate matter less than 10 microns (PM₁₀) concentrations utilizing a direct-reading instrument at the above areas for comparison with guidelines established by the United States Environmental Protection Agency (US EPA.)
- Measurement of Total Volatile Organic Compounds (TVOCs) concentrations utilizing a direct-reading instrument at the above areas for comparison with relevant guidelines.
- Air sampling for total airborne fungal spore concentrations at the above areas using Allergenco-D cassettes affixed to a Buck BioAire™ Model B520 Bioaerosol Sampling Pump.



Visual Observations

Tidewater's assessment included a visual inspection of representative areas of the school including Multipurpose Room, Library, Classroom 4, Classroom 6, Classroom 9, Classroom 16, Physical Education Room, Classroom 28, Reading Room and Classroom T2 of Lamont Elementary School. The results of Tidewater's visual inspection are as follows:

Multipurpose Room

The multipurpose room was vacant at the time of the inspection. The return air grills of the air conditioning unit contained excessive levels of dust. Four (4) wall-mounted air conditioning units were in operation at the time of the inspection. No signs of suspect mold growth, or prior or ongoing water-intrusion problems, were observed in the Multipurpose Room. No unusual odors were detected from the Multipurpose Room. All trash receptacles were empty and general housekeeping appeared to be satisfactory.

Library

The Library had over 30 students at the time of the inspection. Two (2) window-mounted air conditioning units were in operation at the time if the inspection. The returns air grills located on the ceiling appeared to be clean. Housekeeping activities observed in the Library appeared to be adequate. No signs of suspect mold growth, or prior or ongoing water-intrusion problems, were observed. No unusual odors were detected.

Classroom 4

Classroom 4 had over 15 students at the time of the inspection. A wall-mounted fan coil unit was observed in the classroom. There were stuffed toys stored on top of the air supply grills of this fan coil unit hindering the air flow to the classroom. One (1) window-mounted air conditioning unit was also in operation. General housekeeping appeared to be adequate. No signs of suspect mold growth, or prior or ongoing water-intrusion problems, were observed. No unusual odors were detected.

Classroom 6

Classroom 6 was vacant at the time of the inspection. One (1) window-mounted air conditioning unit was also in operation. Tidewater observed the air supply grills of this air conditioning unit to contain excessive levels of dust. A wall-mounted fan coil unit was also observed in the classroom. The grills of this unit also contained excessive levels of dust/ dirt. General housekeeping within the classroom appeared to be deficient. No signs of suspect mold growth, or prior or ongoing water-intrusion problems were observed within the room. No unusual odors were detected in the classroom.

Classroom 9

Classroom 9 was vacant at the time of the inspection. One (1) window-mounted air conditioning unit was in operation. Tidewater observed the air supply grills of this air conditioning unit to be generally clean. General housekeeping within the classroom appeared to be deficient. No signs of suspect mold growth, or prior or ongoing water intrusion problems, were observed within the room. No unusual odors were detected in the classroom.



Classroom 16

Classroom 16 had over 10 students at the time of the inspection. One (1) window-mounted air conditioning unit was in operation. Tidewater observed the air supply grills of this air conditioning unit to contain excessive levels of dust/ dirt. General housekeeping within the classroom appeared to be deficient. No signs of suspect mold growth, or prior or ongoing water-intrusion problems were observed within the room. No unusual odors were detected in the classroom.

Physical Education Teacher's Class

The PE Teacher's class had four (4) students at the time of the inspection. The air supply vents located in the ceiling contained excessive levels of dust/ dirt. The general air circulation within the classroom was poor and a pedestal fan was in operation to increase air circulation. General housekeeping within the classroom appeared to be deficient. No signs of suspect mold growth, or prior or ongoing water intrusion problems were observed. No unusual odors were detected in the classroom.

Classroom 28

Classroom 28 had over 15 students at the time of the inspection. One (1) window-mounted air conditioning unit was in operation. Tidewater observed the air supply grills of this air conditioning unit to contain excessive levels of dust/ dirt. General housekeeping within the classroom appeared to be deficient. No signs of suspect mold growth, or prior or ongoing water-intrusion problems were observed within the room. No unusual odors were detected in the classroom.

Reading Room

Two (2) students were in the Reading Room at the time of the inspection. The fan coil unit was not in operation at the time of the inspection and the air circulation within the classroom appeared to be poor. No signs of suspect mold growth, or prior or ongoing water intrusion problems were observed within the Reading Room. Tidewater did not detect any unusual odors in the Reading Room at the time of the inspection.

Classroom T-2 (Exterior)

Classroom T-2 was an external building and was vacant at the time of the inspection. A wall mounted fan coil unit was in operation. Tidewater observed the air supply grills and return air grills of this air conditioning unit to contain excessive levels of dust/ dirt. No signs of suspect mold growth, or prior or ongoing water intrusion problems were observed within Classroom T-2. No unusual odors were detected in the classroom.

Comfort Parameter Air Testing

During the assessment, Tidewater recorded temperature, relative humidity, carbon dioxide (CO₂), and carbon monoxide (CO) measurements in the above-mentioned locations of Lamont Elementary School using a TSI Q-Track Air Quality Meter (Model Number TSI Q-Track 7565, Serial Number 7565x0931002, Calibration Date: April 18, 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 downloaded and recorded. Samples were obtained for comparison with guidelines established by the American Society for Heating Refrigeration and Air Conditioning (ASHRAE) Standard 62.1 – 2016, Ventilation for Acceptable Indoor Air Quality. A background sample was obtained in front of the



main entrance to 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 – 2016, the temperature range in summer months should be maintained between 73.0°F and 79.0°F for maximum occupant comfort. The ASHRAE guideline for temperature for winter months is between 68.0°F and 74.5°F. The indoor temperature levels recorded in the assessed areas ranged between 69.3°F and 76.0°F, and the background temperature outside the building was 79.7°F. The temperature levels recorded within the majority of the common areas and classrooms were within the recommended range for the spring-summer transitional period.

Per the same guideline, a maximum relative humidity level of 65.0% is recommended to reduce the likelihood of condensation on cold surfaces. Relative humidity levels recorded in the assessed areas ranged between 47.5% and 65.7%. The background relative humidity level outside the building was 36.6%. The relative humidity levels in all areas assessed apart from Classroom 28 were below the ASHRAE recommended maximum relative humidity guideline of 65.0%. The relative humidity level in Classroom 28 marginally exceeded the ASHRAE recommended maximum relative humidity guideline of 65.0%.

ASHRAE Standard 62.1 – 2016 recommends that indoor CO₂ concentrations not exceed 700 ppm above the outdoor background CO₂ level. The CO₂ levels recorded in the assessed areas ranged between 532 ppm to 1,238 ppm. The background CO₂ level outside the building was 297 ppm. The CO₂ levels in Classroom 16 and Classroom 28 exceeded 700 ppm above the outdoor background CO₂ level of 297 ppm and indicates inadequate air flow into these office areas. These areas are highlighted in Table 1, in **Attachment A**.

The CO concentrations recorded in all of the assessed areas were below the maximum guideline of 9 ppm recommended by the Indoor Air Quality Association (IAQA) for CO in occupied indoor environments.

Particulate Matter Less than 10 Microns (PM 10)

Tidewater conducted air sampling for respirable dust particulates using a TSI® DUST TRAK DRX™ Aerosol Monitor (Serial Number 8534170101, Calibrated Date: March 1, 2019.) The TSI® DUST TRAK DRX™ Aerosol Monitor was equipped with a PM10 (10 µm) respirable impactor. 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 designated location and the average concentration was recorded. Samples were taken for comparison with guidelines established by the EPA NAAQS. Tidewater also obtained a background sample from outside 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 National Ambient Air Quality Standard (NAAQS) for Particulate Matter, Final Rule (January 15, 2013), 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/m³) or 0.150 milligrams per cubic meter of air (mg/m³.) The results of the PM10 analysis indicate that the average PM10 dust concentration recorded in all of the assessed areas ranged between 0.021 mg/m³ and 0.044 mg/m³. The average PM10 dust concentration in the background sample obtained in front of the main entrance was 0.016 mg/m³.



The results of the PM10 monitoring indicate that the PM10 dust concentrations all areas assessed were below the EPA 24-hour primary and secondary NAAQS of 0.150 mg/m³.

Total Volatile Organic Compound (TVOC) Air Testing

Tidewater obtained direct read measurements for Total Volatile Organic Compounds (TVOCs) using a Mini-RAE 2000 Hand Held VOC meter (Model Number MINIRAE 2000, Serial Number 110-010833, Calibration Date April 9, 2019.) 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 threshold limits recommended for typical indoor occupied environments.

A background sample was also obtained outdoors in front of the main entrance of the school building for comparison to the indoor readings. The results of the particulate matter sampling are provided in Table 3, in **Attachment A**.

There are no OSHA published guidelines for TVOCs. However, in general, the indoor air quality TVOC threshold for typical indoor occupied environments should not exceed 1,000 ppb (1.0 ppm) isobutylene units. The TVOC concentrations recorded in all of the assessed areas were below the recommended threshold level of 1.0 ppm.

Spore Trap Bioaerosol Sampling

On May 24, 2019, Tidewater collected a total of 10 spore trap air samples using Allegenco-D cassettes to characterize potential airborne fungal spores within select areas of Lamont Elementary School. A background sample was also collected outside the main entrance to the school building for comparison purposes.

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, Calibration Date: February 6, 2019) calibrated to a flow rate of 15.0 Liters per minute. Each sample was run for a period of five (5) minutes at each sample location to collect a total sample volume of 75.0 liters of air.

Once collected, the samples were transported to EMSL Analytical Laboratory (EMSL) located in Beltsville, Maryland for analysis. 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, airborne concentrations indoors should be less than that found in the outdoor air, with similar species composition. Indoor spore counts significantly greater than those detected outdoors, or the presence of large numbers of different types of spores indoors that are not found outdoors, may indicate contamination and potential indoor air quality problems.



The total mold spore counts for the interior samples ranged between 2,580 and 119,450 spores per cubic meter (spores/m³.) The total mold spore concentration in the outdoors (background) sample was 55,250 spores/m³. The total mold spore concentrations in all interior locations sampled apart from the Multipurpose Room were significantly below the outdoors (background) total mold spore concentration. However, the mold spore concentration in the Multipurpose Room was greater than 2X the background mold spore concentration.

The concentration of species of the genus *Basidiospores* detected in the multipurpose room (86,800 spores /m³) was approximately 5X that of the *Basidiospores* concentration in the background (17,800 spores /m³.) *Basidiospores* can be found anywhere and spread via wind. Concentrations are typically high in the background, as non-dangerous basidiospores are common outdoors. *Basidiospores* are moisture driven as their spores disseminate during rain or in times of high humidity.

Although, visible surface mold formations were not observed in the Multipurpose Room during the visual inspection, it is possible that surface mold could be present above the drop ceiling or in the duct system of the Multipurpose Room; therefore further investigation is warranted in the Multipurpose Room.

The summary of the results for the spore trap sampling are provided in Table 4 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

Based on this IAQ and mold assessment survey, Tidewater offers the following conclusions:

- Tidewater's visual inspection did not reveal any evidence of standing water, active water intrusion or suspect mold growth on accessible walls, floors and ceilings in the assessed areas.
- The supply air grills of the air conditioning units in the Multipurpose Room, Classroom 6, Classroom 16, Physical Education Teacher's Class, Classroom 28, and Classroom T-2 contained excessive levels of dirt/dust.
- General housekeeping in all classrooms appeared to be deficient.
- Temperature, CO, PM10, and TVOC readings recorded within the assessed areas were all within industry standards and guidelines.
- The relative humidity level in Classroom 28 marginally exceeded the ASHRAE recommended maximum relative humidity guideline of 65.0%.
- The CO₂ levels in Classroom 16 and Classroom 28 exceeded 700 ppm above the outdoor background CO₂ level of 297 ppm and indicates insufficient air exchanges.
- The mold spore concentrations in all interior locations sampled apart from the Multipurpose Room were significantly below the outdoors (background) total mold spore concentration. However, the mold spore concentration in the Multipurpose Room was greater than 2X the background mold spore concentration.
- The concentration of species of the genus *Basidiospores* detected in the multipurpose room (86,800 spores /m³) was 5X that of the *Basidiospores* concentration in the background (17,800 spores /m³) and may be an indicator of potential fungal contamination.



Recommendations

Based on the results of the assessment, Tidewater offers the following recommendations:

- Clean all air supply grills in the window/ceiling or wall mounted HVAC units of the Multipurpose Room, Classroom 6, Classroom 16, Physical Education Teacher's Class, Classroom 28, and Classroom T-2 with a 10% bleach solution to eliminate observed dirt/dust.
- Ensure that all cleaning activities are conducted after hours when the classrooms are vacant to minimize exposure to occupants.
- Maintain good housekeeping practices in all common areas and classrooms. All common area and classroom floors should be broom cleaned at the end of each day. Furthermore, all horizontal surfaces including desktops, furniture, window sills and suspended light fixtures should be cleaned on a routine basis to prevent the accumulations of dust.
- Ensure HVAC System supplying is properly balanced per design requirements and current use/occupancy in order to ensure adequate ventilation throughout the classrooms.
- Ensure the ventilation systems are turned on in all classrooms and are operating at all times when the classrooms are occupied to provide sufficient air flow and ventilation to the classrooms.
- Increase the air exchange rates to Classroom 16 and Classroom 28 in order improve the air circulation within the classrooms.
- Adjust the HVAC system serving Classroom 16 in order to lower the relative humidity level below 65.0% to minimize the potential for fungi growth.
- Ensure the air supply vent of the fan coil unit in Classroom 4 is left unobstructed to ensure adequate air supply into the classroom.
- It is recommended that the Multipurpose Room is re-tested for total fungal spores after all cleaning activities are complete.

Qualifications

Tidewater has endeavored to investigate existing conditions in representative areas of Lamont Elementary School located at 7101 Good Luck Road, New Carrollton, Maryland as they pertain to indoor air quality. Our conclusions and recommendations are based on the 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 Georges County Public Schools. Please contact us should any questions arise concerning this report or if we may be of further assistance.



Sincerely,
Tidewater, Inc.

A handwritten signature in black ink, appearing to read "Skanda Abeysekere".

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

A handwritten signature in black ink, appearing to read "Jonathan N. Schatz".

Jonathan N. Schatz, MS
Manager, IH Services

SA/JNS

Attachments: **Attachment A – Summary of Comfort Parameters, Total (Nuisance) Dust, TVOC and Non-Viable Spore Trap Sampling**
Attachment B – Laboratory Reports for Non-Viable Spore Trap Sampling
Attachment C – Calibration Certificates
Attachment D – Qualifications
Attachment E – Floor Plan with Sampling Locations



Attachment A

Summary of Comfort Parameters, Total (Nuisance) Dust, TVOC and Non-Viable Spore Trap Sampling



Table 1: Indoor Air Quality Comfort Parameters Lamont Elementary School				
Location	Temperature (°F)	Relative Humidity (%)	Carbon Dioxide (ppm)	Carbon Monoxide (ppm)
May 24, 2019				
Multipurpose Room	75.5	59.7	590	0.0
Library	75.2	52.6	532	0.0
Classroom 4	76.0	59.4	741	0.0
Classroom 6	75.8	56.6	680	0.0
Classroom 9	70.7	56.2	830	0.0
Classroom 16	75.0	47.5	1,238	0.0
Physical Education Teach.	76.0	51.1	992	0.0
Classroom 28	72.2	65.7	1,080	0.0
Reading Room	75.8	59.0	783	0.0
Classroom T-2	69.3	48.0	653	0.0
Background	79.7	36.6	297	0.0

- Numbers highlighted in red indicates locations in which temperature, carbon dioxide or relative humidity levels were either above or below the guidelines recommended by the American Society for Heating Refrigeration and Air Conditioning (ASHRAE) Standard 62.1 – 2016.



Table 2: Particulate Matter Less than 10 Microns (PM10) Lamont Elementary School	
Location	Particulate Matter (PM10)
	Concentration (mg/m³)
May 24, 2019	
Multipurpose Room	0.030
Library	0.029
Classroom 4	0.044
Classroom 6	0.027
Classroom 9	0.021
Classroom 16	0.033
Physical Education Teach.	0.029
Classroom 28	0.022
Reading Room	0.034
Classroom T-2	0.021
Background (Outdoors)	0.016



Table 3: Total Volatile Organic Compounds (TVOCs) Lamont Elementary School	
Location	Concentration (ppm)
May 24, 2019	
Multipurpose Room	0.0
Library	0.0
Classroom 4	0.0
Classroom 6	0.0
Classroom 9	0.0
Classroom 16	0.0
Physical Education Teach.	0.0
Classroom 28	0.0
Reading Room	0.0
Classroom T-2	0.0
Background (Outdoors)	0.0



Table 4: Spore Trap Sampling Results Lamont Elementary School			
May 24, 2019			
Sample Number	Sample Location	Sample Volume (L)	Total Fungi Concentration (Counts/m³)
LES-1	Multipurpose Room	75.0	119,450
LES-2	Library	75.0	22,760
LES-3	Classroom 4	75.0	51,800
LES-4	Classroom 6	75.0	32,020
LES-5	Classroom 9	75.0	8,160
LES-6	Classroom 16	75.0	16,560
LES-7	Physical Education Teach.	75.0	51,430
LES-8	Classroom 28	75.0	2,580
LES-9	Reading Room	75.0	48,970
LES-10	Classroom T-2	75.0	33,500
BG-1	Background (Outdoors)	75.0	55,250

- Highlighted Area indicates location where the concentrations of the indoor sample exceeded the level detected in the background sample.



TIDEWATER INC

ENGINEERS / SCIENTISTS / PROGRAM MANAGERS

Attachment B

Laboratory Reports for Non-Viable Spore Trap Mold Sampling



EMSL Analytical, Inc.

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

Order ID: 191906033
Customer ID: TIDE50
Customer PO:
Project ID:

Attn: Skanda Abeyeskere
Tidewater, Inc.
6625 Selnick Drive
Suite A
Elkridge, MD 21075

Phone: (410) 540-8700
Fax: (410) 997-8713
Collected: 05/24/2019
Received: 05/24/2019
Analyzed: 05/29/2019

Proj: PGCPs Lamont ES 5419-15

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

Lab Sample Number:	191906033-0001			191906033-0002			191906033-0003		
Client Sample ID:	LES-1			LES-2			LES-3		
Volume (L):	75			75			75		
Sample Location:	Multipurpose Room			Library			Classroom 4		
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	737	32200	27	87	3800	16.7	300	13100	25.3
Aspergillus/Penicillium	-	-	-	-	-	-	3	100	0.2
Basidiospores	1990	86800	72.7	425	18500	81.3	842	36700	70.8
Bipolaris++	-	-	-	-	-	-	2*	30*	0.1
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	9	400	0.3	8	300	1.3	26	1100	2.1
Curvularia	1	40	0	1*	10*	0	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	2	90	0.2
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1*	10*	0	3	100	0.4	5	200	0.4
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	1	40	0.1
Scopulariopsis/Microascus	-	-	-	-	-	-	9	400	0.8
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Bispora	-	-	-	1	40	0.2	1	40	0.1
Cercospora++	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	1*	10*	0	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
Sporidesmium-like	-	-	-	-	-	-	-	-	-
Tetraploa	-	-	-	-	-	-	-	-	-
Total Fungi	2738	119450	100	526	22760	100	1191	51800	100
Hyphal Fragment	2	90	-	2*	30*	-	5	200	-
Insect Fragment	1	40	-	1	40	-	-	-	-
Pollen	3	100	-	2	90	-	5	200	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	4	-	-	4	-	-	4	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	2	-
Background (1-5)	-	2	-	-	2	-	-	3	-

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

Stefanie Schneider, Microbiology Lab Manager
or Other Approved Signatory

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

Samples received in good condition unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. 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. Interpretation and use of test results are the responsibility of the client. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.
Samples analyzed by EMSL Analytical, Inc. Beltsville, MD AIHA-LAP, LLC--EMLAP Lab 102891

Initial report from: 05/30/2019 10:29:16

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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Order ID: 191906033
Customer ID: TIDE50
Customer PO:
Project ID:

Attn: Skanda Abeyeskere
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Phone: (410) 540-8700
Fax: (410) 997-8713
Collected: 05/24/2019
Received: 05/24/2019
Analyzed: 05/29/2019
Proj: PGCPs Lamont ES 5419-15

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

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	191906033-0004 LES-4 75 Classroom 6			191906033-0005 LES-5 75 Classroom 9			191906033-0006 LES-6 75 Classroom 16		
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	159	6940	21.7	43	1900	23.3	53	2300	13.9
Aspergillus/Penicillium	3	100	0.3	2	90	1.1	-	-	-
Basidiospores	565	24700	77.1	131	5720	70.1	305	13300	80.3
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	4	200	0.6	10	440	5.4	17	740	4.5
Curvularia	-	-	-	-	-	-	1	40	0.2
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	1	40	0.1	-	-	-	-	-	-
Myxomycetes++	-	-	-	1*	10*	0.1	2	90	0.5
Pithomyces++	-	-	-	-	-	-	1*	10*	0.1
Rust	-	-	-	-	-	-	1	40	0.2
Scopulariopsis/Microascus	-	-	-	-	-	-	1	40	0.2
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Bispora	-	-	-	-	-	-	-	-	-
Cercospora++	1	40	0.1	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
Sporidesmium-like	-	-	-	-	-	-	-	-	-
Tetraploa	-	-	-	-	-	-	-	-	-
Total Fungi	733	32020	100	187	8160	100	381	16560	100
Hyphal Fragment	2	90	-	1	40	-	2	90	-
Insect Fragment	-	-	-	-	-	-	1	40	-
Pollen	-	-	-	1	40	-	1*	10*	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	3	-	-	3	-	-	4	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-	-	2	-

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

Stefanie Schneider, Microbiology Lab Manager
or Other Approved Signatory

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

Samples received in good condition unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. 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. Interpretation and use of test results are the responsibility of the client. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.
Samples analyzed by EMSL Analytical, Inc. Beltsville, MD AIHA-LAP, LLC--EMLAP Lab 102891

Initial report from: 05/30/2019 10:29:16

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



EMSL Analytical, Inc.

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

Order ID: 191906033
 Customer ID: TIDE50
 Customer PO:
 Project ID:

Attn: Skanda Abeyeskere
 Tidewater, Inc.
 6625 Selnick Drive
 Suite A
 Elkridge, MD 21075

Phone: (410) 540-8700
Fax: (410) 997-8713
Collected: 05/24/2019
Received: 05/24/2019
Analyzed: 05/29/2019

Proj: PGCPs Lamont ES 5419-15

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

Lab Sample Number:	191906033-0007			191906033-0008			191906033-0009		
Client Sample ID:	LES-7			LES-8			LES-9		
Volume (L):	75			75			75		
Sample Location:	Physical Ed. Center			Classroom 28			Reading Room		
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	1	40	0.1
Ascospores	444	19400	37.7	23	1000	38.8	316	13800	28.2
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	699	30500	59.3	32	1400	54.3	754	32900	67.2
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	25	1100	2.1	3	100	3.9	49	2100	4.3
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	1	40	0.1	-	-	-	-	-	-
Myxomycetes++	2	90	0.2	1	40	1.6	1*	10*	0
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	7	300	0.6	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Bispora	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	1	40	0.1
Polythrincium	-	-	-	1	40	1.6	1	40	0.1
Sporidesmium-like	-	-	-	-	-	-	-	-	-
Tetraploa	-	-	-	-	-	-	1	40	0.1
Total Fungi	1178	51430	100	60	2580	100	1124	48970	100
Hyphal Fragment	4	200	-	3	100	-	3	100	-
Insect Fragment	1	40	-	2	90	-	1	40	-
Pollen	1	40	-	1	40	-	2	90	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	4	-	-	3	-	-	4	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-	-	2	-

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

Stefanie Schneider

Stefanie Schneider, Microbiology Lab Manager
 or Other Approved Signatory

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

Samples received in good condition unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. "*" Denotes particles found at 300X. "-" Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. 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. Interpretation and use of test results are the responsibility of the client. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.
 Samples analyzed by EMSL Analytical, Inc. Beltsville, MD AIHA-LAP, LLC--EMLAP Lab 102891

Initial report from: 05/30/2019 10:29:16

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



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Phone/Fax: (301) 937-5700 / (301) 937-5701
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Order ID: 191906033
Customer ID: TIDE50
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Attn: Skanda Abeyeskere
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6625 Selnick Drive
Suite A
Elkridge, MD 21075

Phone: (410) 540-8700
Fax: (410) 997-8713
Collected: 05/24/2019
Received: 05/24/2019
Analyzed: 05/29/2019

Proj: PGCPs Lamont ES 5419-15

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

Lab Sample Number:	191906033-0010			191906033-0011		
Client Sample ID:	LES-10			BG-1		
Volume (L):	75			75		
Sample Location:	Ext T-2			Background		
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-	2	90	0.2
Ascospores	122	5320	15.9	644	28100	50.9
Aspergillus/Penicillium	7	300	0.9	6	300	0.5
Basidiospores	561	24500	73.1	407	17800	32.2
Bipolaris++	-	-	-	-	-	-
Chaetomium	1	40	0.1	-	-	-
Cladosporium	75	3300	9.9	183	7990	14.5
Curvularia	-	-	-	-	-	-
Epicoccum	-	-	-	1	40	0.1
Fusarium	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-
Myxomycetes++	-	-	-	2	90	0.2
Pithomyces++	-	-	-	-	-	-
Rust	1	40	0.1	3	100	0.2
Scopulariopsis/Microascus	-	-	-	14	610	1.1
Stachybotrys/Memnoniella	-	-	-	-	-	-
Bispora	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-
Polythrincium	-	-	-	2	90	0.2
Sporidesmium-like	-	-	-	1	40	0.1
Tetraploa	-	-	-	-	-	-
Total Fungi	767	33500	100	1265	55250	100
Hyphal Fragment	2	90	-	2	90	-
Insect Fragment	-	-	-	-	-	-
Pollen	1	40	-	30	1300	-
Analyt. Sensitivity 600x	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	3	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-
Background (1-5)	-	2	-	-	2	-

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

Stefanie Schneider, Microbiology Lab Manager
or Other Approved Signatory

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

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

Initial report from: 05/30/2019 10:29:16

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

191906033
Microbiology Chain of Custody
EMSL Order Number (Lab Use Only):

PHONE:
FAX:

Company: Tidewater Inc.		EMSL-Bill to: <input type="checkbox"/> Different <input type="checkbox"/> Same <small>If Bill to is Different note Instructions in Comments**</small>	
Street: 6625 Slenick Drive, Suite A		<i>Third Party Billing requires written authorization from third party</i>	
City: Elkridge	State/Province: Maryland	Zip/Postal Code:	Country:
Report To (Name): Skanda Abeyesekere		Telephone #:	
Email Address: skanda@tideh2o.net		Fax #:	Purchase Order:
Project Name/Number: PGCPS Lamont ES		Please Provide Results: <input type="checkbox"/> FAX <input type="checkbox"/> E-mail <input type="checkbox"/> Mail	
U.S. State Samples Taken: MD 5419-015		Connecticut Samples: <input type="checkbox"/> Commercial <input type="checkbox"/> 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 Cyclax	• M002 Cyclax-d	
• M030 Micro 5	• M174 MoldSnap	• M176 Relle Smart	• M130 Via-Cell	

Other Microbiology Test Codes

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

Preservation Method (Water):

Name of Sampler: SKANDA ABEYESEKERE	Signature of Sampler:
--	------------------------------

Sample #	Sample Location	Sample Type	Test Code	Volume/Area	Date/Time Collected
Example: A1	Kitchen	Air	M001	75L	1/1/12 4:00 PM
LES-1	Multipurpose Room	Air	M032	75-0	05/24/2019
-2	Library	↓	↓	↓	↓
-3	Classroom 4				
-4	Classroom 6				
-5	9				
-6	16				
-7	physical ed. teacher				
-8	Classroom 2B				
-9	Reading Room				

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

Relinquished (Client):	Date:	Time:
Received (Client):	Date: 05/24/19	Time: 12:00pm
Comments: H. Permitt check in 5/24/19 11:30am		

* Skanda OK w/ 3 day TAT 5/24/19 *



TIDEWATER INC

ENGINEERS / SCIENTISTS / PROGRAM MANAGERS

Attachment C
Calibration Certificates



IAQ Meter Calibration Certificate

Cal Standard	Lot #	Expiration
	18-6508	4/18/2020

Carbon Monoxide Gas	Reading ppm	Acceptable Range
35 ppm ▼	35.0	(32 - 38) ▼

Carbon Dioxide Gas	Reading ppm	Acceptable Range
1000 ppm ▼	1008.0	(950 - 1050) ▼

Model	TSI Q-Trak 7565 ▼
S/N	7565x0931002
Barcode	u59038x
Order #	398188

Calibrated By Bryce Spontak ▼

Date of Calibration 05/16/19

All calibrations performed by FEI conform to manufacturer's specifications. Please report any issues within 24 hours of receiving equipment.

All calibration gas used is traceable to NIST. Additional documentation is available upon request.

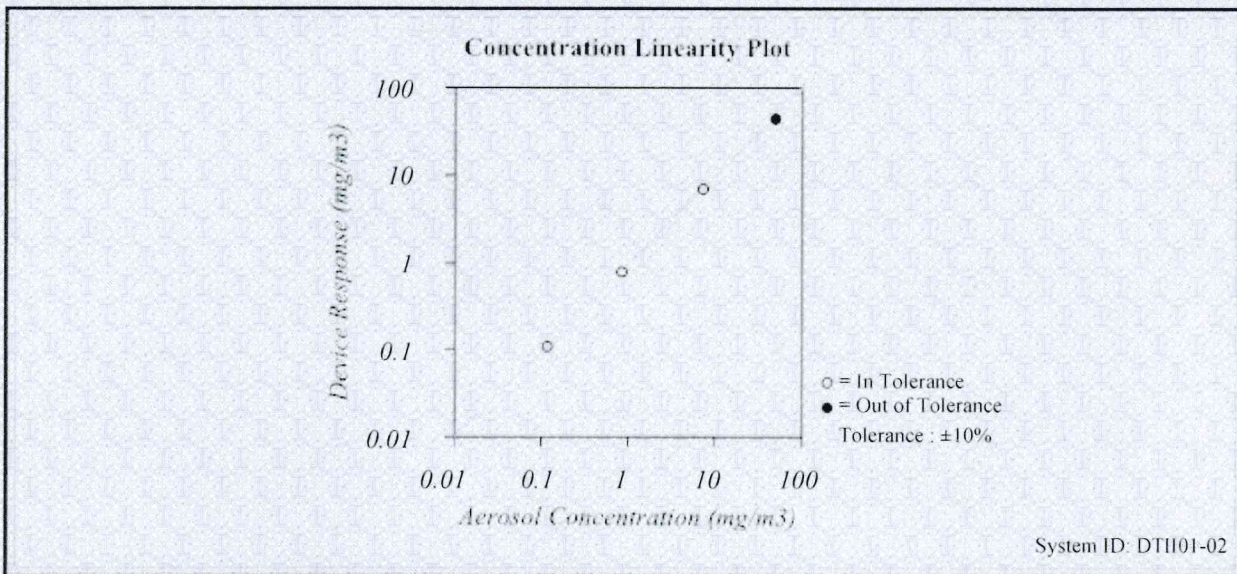


CERTIFICATE OF CALIBRATION AND TESTING

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			Model	8534
Temperature	76.6 (24.8)	°F (°C)	Serial Number	8534170101
Relative Humidity	24	%RH		
Barometric Pressure	29.14 (986.8)	inHg (hPa)		

- | | |
|--|--|
| <input type="checkbox"/> As Left | <input type="checkbox"/> In Tolerance |
| <input checked="" type="checkbox"/> As Found | <input checked="" type="checkbox"/> Out of Tolerance |



FLOW AND PRESSURE VERIFICATION				SYSTEM DTII01-02			
Parameter	Standard	Measured	Allowable Range	Parameter	Standard	Measured	Allowable Range
Flow lpm	3.0	3.0	2.85 ~ 3.15	Pressure kPa	98.6	98.6	93.71 ~ 103.57

Pump run time: 25 Hours, Pump voltage: 433 Bits

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	Measurement Variable	System ID	Last Cal.	Cal. Due
Temp/Humidity	E005409	10-19-17	10-31-18	Temp/Humidity	E005410	10-19-17	10-31-18
DC Voltage	E003314	05-03-17	05-31-18	DC Voltage	E003315	05-03-17	05-31-18
Photometer	E003319	01-09-18	07-31-18	Microbalance	M001324	11-02-16	11-30-18
1 um PSL	679755	n/a	n/a	3 um PSL	180387	n/a	n/a
10 um PSL	167947	n/a	n/a	Pressure	E003511	10-02-17	10-31-18
Flowmeter	E002471	04-20-17	04-30-18				

Verified

March 1, 2018
Date



INSTRUMENT CALIBRATION REPORT

Pine Environmental Services, LLC.

Tidewater MD

Instrument ID 110-010833
Description MINIRAE 2000
Calibrated 4/9/2019

Manufacturer Rae Systems
Model Number MINIRAE 2000
Serial Number 110-010833
Location Maryland
Department CATHY MOORE

Frequency 6 Months
Status Pass
Temp 24
Humidity 39

Calibration Specifications

Group # 1
Group Name ISOBUTYLENE
Stated Accy Pct of Reading

Range Acc % 0.0000
Reading Acc % 3.0000
Plus/Minus 0.00

<u>Nom In Val / In Val</u>	<u>In Type</u>	<u>Out Val</u>	<u>Out Type</u>	<u>Fnd As</u>	<u>Lft As</u>	<u>Dev%</u>	<u>Pass/Fail</u>
100.00 / 100.00	ppm	100.00	ppm	92.80	101.00	1.00%	Pass

Test Instruments Used During the Calibration

(As Of Cal Entry Date)

<u>Test Instrument ID</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Model Number</u>	<u>Serial Number / Lot Number</u>	<u>Last Cal Date</u>	<u>Next Cal Date / Expiration Date</u>
MD ISO 100PPM FBI-248-100-12	MD ISO 100PPM	Pine Environmental Services, Inc.	FBI-248-100-12	34LS-248-100	5/23/2022	
MD ZERO AIR FBI-1-25	ZERO AIR Oxygen 20.9%VOL, Nitrogen Balance	Pine Environmental Services, Inc.	31844	FBI-1-25		

Notes about this calibration

Calibration Result Calibration Successful
Who Calibrated Ryan Armstrong

Pine Environmental Services, LLC. hereby certifies that this instrument is calibrated and functions to meet the manufacturer's specifications using NIST traceable standards, or is derived from accepted values of physical constants.

Certificate of Conformance

Buck BioAire™

Buck BioSlide™

Serial number: B153043 Date Issued: 2-6-19

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. Coover

Information contained in this document should not be reproduced in any form without the written consent of A.P. Buck Inc. It is for reference only and cannot be used as a form of endorsement by any private or governmental regulatory body.

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.

COCR-004 REV-01 3/3/2006

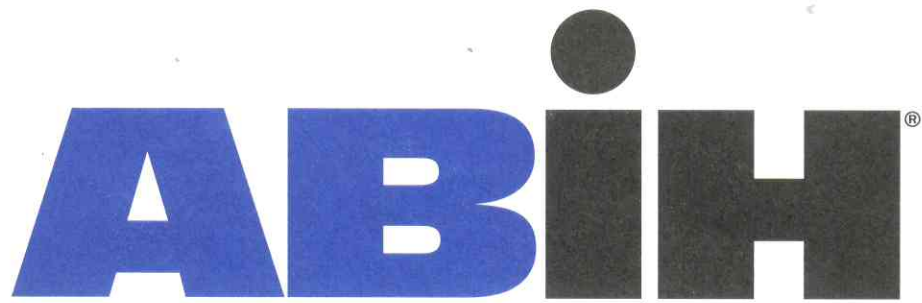


TIDEWATER INC

ENGINEERS / SCIENTISTS / PROGRAM MANAGERS

Attachment D

Qualifications



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

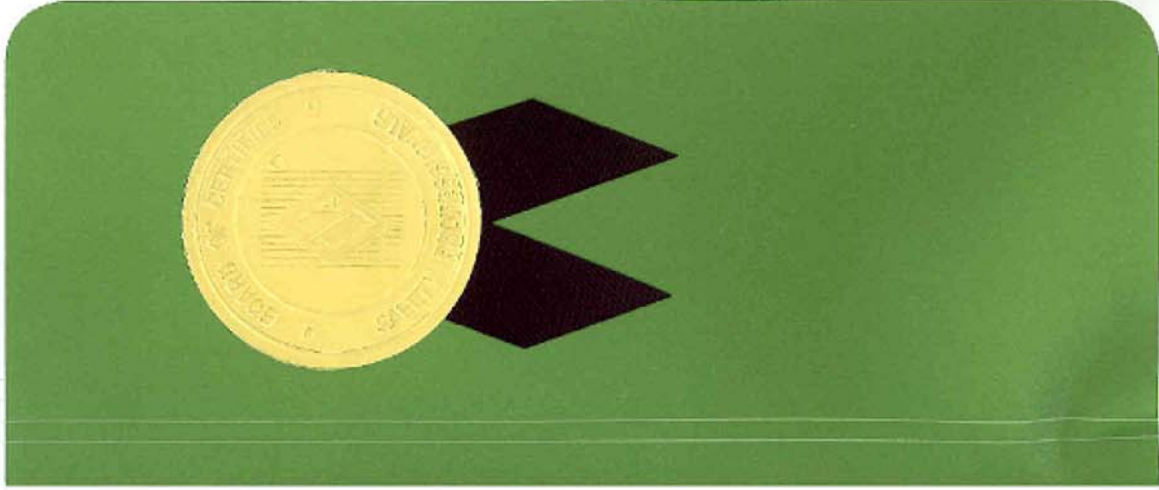
CIH

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



Susan Ripple
Chair, ABIH

William K. Oliver
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



<i>Paul S Adams</i>	President
<i>Linda Japp</i>	Secretary
20110	CSP No.



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**



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.



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





TIDEWATER INC

ENGINEERS / SCIENTISTS / PROGRAM MANAGERS

Attachment E

Floor Plan with Sampling Locations

