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Setting the Standard in Comprehensive Environmental Solutions

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Learning to Live • Loving to Learn
ACPS
Alexandria City Public Schools

Indoor Air Quality Assessment Report

at

Alexandria City High School

3330 King Street,
Alexandria, VA 22302

Report Prepared for:

John Contreras

Alexandria City Public Schools

2601 Cameron Mills Rd, Alexandria, VA 22302

Dated: September 23, 2021

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ABBREVIATIONS AND ACRONYMS

AHU	Air-Handling Unit
AIHA	American Industrial Hygiene Association
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASTM	American Society for Testing and Materials
CO	Carbon Monoxide
CO2	Carbon Dioxide
EMLAP	Environmental Microbiology Laboratory Accreditation Program
HVAC	Heating, Ventilating, And Air-Conditioning
IAQ	Indoor Air Quality
NIST	National Institute for Standards and Technology
NVLAP	National Voluntary Laboratory Accreditation Program
RH	Relative Humidity

Abbreviations involving scientific volume and measurements involving media or water sampling

Spores/m3	Mold spores per cubic meter of air
LPM	Liters Per Minute
NTE	Not to exceed
°F	degree Fahrenheit
PPM	Parts Per Million

1. Executive Summary

Total Environmental Concepts (TEC) was contracted by Alexandria City Public Schools (ACPS) to perform Indoor Air Quality (IAQ) assessments at 19 schools. Douglas MacArthur Elementary was out of service and not assessed.The original list included:

- **Alexandria City High School (AC)**
- AC Satellie Campus, Central Offices (CO)
- Charles Barrett Elementary School (BC)
- Cora Kelly School for Math (CK)
- Frances C. Hammond Elementary School (FH)
- George Mason Elementary School (GM)
- George Mason Elementary School (GW)
- James Polk Elementary School (JP)
- John Adams Elementary School (JA)
- Lyles-Crouch Elementary School (LC)
- Minnie Howard High School (MH)
- Samuel Tucker Elementary School (ST)
- William Ramsey Elementary School (WR)
- Douglas MacAurthur Elementary School (Out of Service)
- Jefferson-Houston Elementary School (JH)
- Ferdinand T. Day Elementary School (FD)
- Patrick Henry Elementary School (PH)
- Mount Vernon Community School (MV)

This IAQ assessment was conducted at Alexandira City High School on Friday, August 17, 2021. ACPS required that the testing to be based on the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) guidelines. ACPS provided site plans and fifteen (15) sampling locations per school. Sampling locations were chosen by ACPS based on internal review of facilities maintenance records, and a review of facilities maintenance related issues. These sampling locations were selected to collect representative IAQ data in these specific areas and to document any areas of potential concern observed during the site assessment. Representative photographs of the sampling locations can be found in Appendix G. As such, ACPS required that TEC test for the following major indoor air pollutants:

- Radon
- Mold
- TO+15 (VOCs)
- 4-polycyclohexene (4-pch)
- Formaldehyde

In accordance with ASHRAE, TEC also took measurements of the following at each school:

- Carbon Monoxide
- Carbon Dioxide
- Humidity
- Temperature
- Oxygen

Summary of findings and recommendaitons during this limited IAQ investigation:

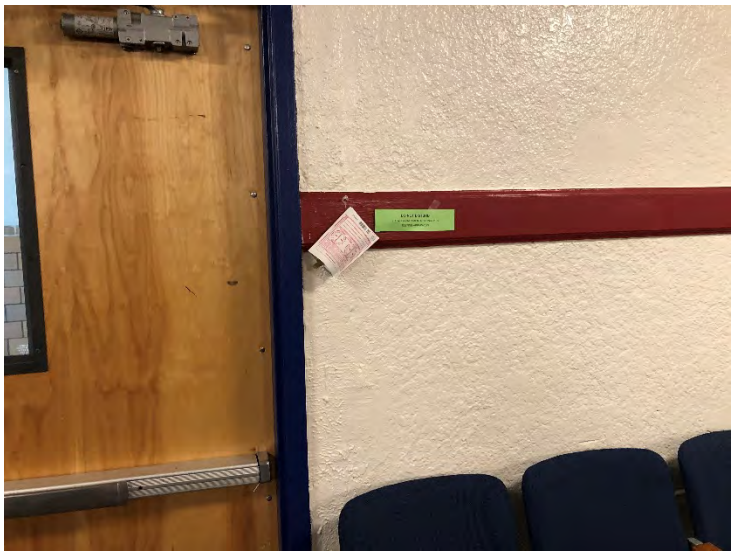
- **Radon** – levels recorded in all locations were less than 4pCi/L, as recommended by EPA and HUD.
- **Mold** – spore levels recorded in all locations were within acceptable ranges as compared to site-specific background mold spore counts.
    - TEC observed water stains on ceiling tiles in Classroom B333. No evidence of active water intrusion was observed. TEC would recommend that ACPS investigate the source of the water staining.
- **VOCs** – The levels of volitile organic compounds (VOCs) recorded at each location were within acceptable ranges, when compared to EPA Regional Screening Levels (RSLs).
- **4-pch** – levels recorded during this investigation were within the LEED (Leadership of Energy and Environmental Design) IAQ guideline of 6.5 ug/m3.
- **Formaldehyde** – the levels of formaldehyde recorded at each location were within an acceptable range, compared to EPA Regional Screening Level (RSLs) of 1ug/m3.
- **Carbon monoxide** – concentrations in all areas were less than the EPA and ASHRAE recommended limit of 9 ppm.
- **Carbon dioxide** – concentrations in all tested spaces were less than the ASHRAE limit of 1,092 ppm.
- **RH** – the relative humidity in all tested spaces was within the ASHRAE guidelines of ≤ 67%, and for the purposes of this investigation ≤ 65%. None of the tested locations had a relative humidity greater than 65%.
- **Temperature** – none of the tested spaces had a temperatures greater than the ASHRAE recommended summer range of 75°F-80.5°F.

2. Assesment Methods

Under the direction of TEC Industrial Hygienist Nikki Satari; Margaret Stanger, Victoria Powers, and Channing Jackson, also of TEC, conducted IAQ inspections and air sampling on August 17, 2021. All air samples were collected three-six feet from floor level, the typical breathing zone for adults.

Mold air samples were collected with a field calibrated Environmental Monitoring Systems High Volume Sampling Pump on Allergenco-D Disposable IAQ Air Monitoring Cassettes at a flow rate of 10 liters per minute for a sample volume of 75 liters during the assessment (photograph below). The Hayes Microbial Consulting laboratory reports are included in Appendix A.

Radon gas samples were collected by securing Air Chek Radon Test Kits (photograph below). Samples were collected within the breathing zone (4-6ft from ground level) at each sample location. In accordance with Air Chek's Radon Test Kit Instructions, kits were secured to walls inside the building and away from, open windows, doors to the outside, or interior air ventilation systems. Sampling time was 72 hours. Radon analytical results can be found in Appendix B.



Formaldehyde gas air samples were collected using static Aldehyde TraceAir II Monitors (photograph below). Samples were secured to surrounding testing equipment to expose the full surface area of the sampling device for the full 4 hours of sampling time. Monitorss were collected after 4 hours and processed for shipment to Phase Separation Science located in Catonsville, MD. Formaldehyde analytical results can be found in Appendix D. Photograph Below.

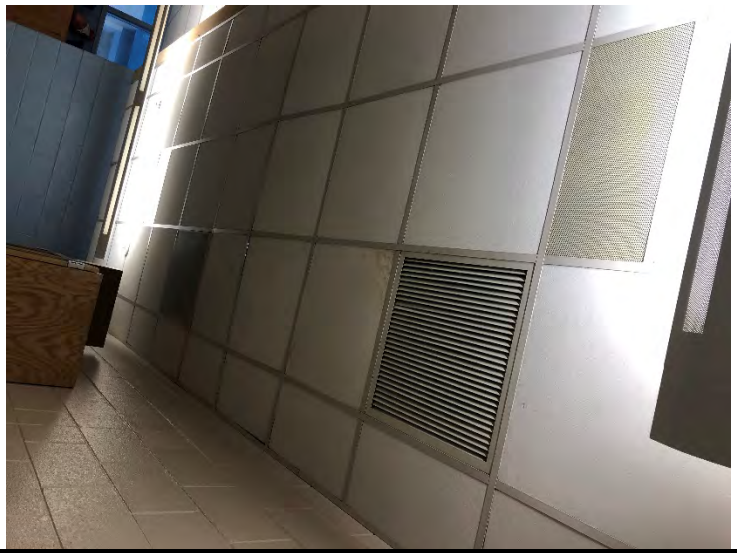
The 4-polycyclohexene (4-PCH) samples were collected in SKC's Anasorb CSC sorbent tubes through Gilian GilAir3 Air Sampling Pumps (photograph below). Pumps were placed within the breathing zone (4-6ft from ground level). Run times were 8 hours or time weighted 4 hour runs. 4-PCH analytical results can be found in Appendix E.

TO+15 (VOCs) samples were collected using ENTECH Instruments 1.4L SUMMA canisters with an ENTECH regulator attachment (photograph below). Canisters were deployed at each location for a run time of 8 hours or a time weighted run time of 4 hours. Internal pressure readings were recorded at the start and end of each sample run time. TO+15 (VOCs) analytical results can be found in Appendix C.

The temperature and relative humidity were taken with the AcuRite Digital Indoor Temperature and Humidity Monitor in the lobby of each school. Teperature and relative humidity readings can be found in Section 5 Mold Sampling Results, below.

Real-time measurements for oxygen, carbon dioxide, carbon monoxide, VOC, hydrogen sulfides were taken with multi-gas detector. These measurements can be found in Section 10 Multi-gas Detector (MSA Altair Multi-gas) Readings. This information can be found in Table 1 below.

3. Visual Observations

Sample Location	August 17, 2021	Visual Observations
B333	Water stain observed on the ceiling of classroom B333.	
B333	Alernative view of water stain observed on ceiling of classroom B333.	

4. Conditions for Human Occupancy

Conditions for Human Occupancy are addressed in ASHRAE Standard 55-2017. These standards are designed to provide comfort for an estimated 80% of occupants. The standard provides for a temperature range from between approximately 67 and 82 °F. A more specific range based on relative humidity, season, clothing worn, activity levels, and other factors can be determined. For example, the standard does not specify a lower humidity range, but notes that issues of comfort, skin irritation, dry mucous membranes, and static electricity may arise when

the relative humidity is less than 30%. ASHRAE Standard 62.1-2016 does recommend an upper limit of 67% humidity to avoid conditions conducive to microbial growth. For the purposes of this investigation, TEC used a conservative upper limit of 65%. The recommended ASHRAE temperature range for schools and office spaces in summer is 75°F-80.5°F.

4.1 Temperature

The recommended ASHRAE temperature range for schools and office spaces in summer is 75°F-80.5°F. The recorded relative humidity in all locations was below 65% and average indoor temperature can be found in Table 2.

4.2 Relative Humidity

ASHRAE Standard 62.1-2016 recommends a relative humidity no greater than 67% to avoid conditions conducive to microbial growth. The relative humidity observed by TEC during this investigation was observed to be below 65% in all locations. Average relative humidity can be found in Table 2.

4.3 Carbon Dioxide

Carbon dioxide (CO2) is a byproduct of combustion burning engines. Generators, furnaces, boilers, idling automobile engines. High CO2 measurements may indictae engine maintenance issues. There were no exceedances in real-time during the IAQ investigation. Complete results can be found in Table 1.

4.4 Carbon Monoxide

Carbon monoxide (CO) is a byproduct of the combustion of fossil fuels. Generators, furnaces, boilers, idling automobile engines, may all produce CO. High CO measurements may indicate engine maintenance issues. There were no exceedances in real-time during the IAQ investigation. Complete results can be found in Table 1.

4.5 Multi-gas Detector Readings

Multi-gas readings were taken at each location to document current conditions at the time of the sampling efforts and to monitor the environment between sampling locations. There were no exceedances in real-time during the IAQ investigation. Complete results can be found in Table 1.

Mold Sampling Results

After collection in the field, mold samples were processed for shipment under strict chain of custody and shipped to Hayes Microbial Consulting, in Midlothian, Virginia.

Federal standards for the number of fungal spores that may be present in the indoor environment, don't exist. The widely accepted guideline in the indoor air quality field, requires that the numbers and types of spores that are present in the indoor environment not exceed those that are present outdoors at any given time.

There will always be some mold spores present in "normal" indoor environments. The purpose of sampling and counting spores is to help determine whether an abnormal condition exists within the indoor environment and if it does, to help pinpoint the area of contamination.

Mold is carried indoors through building entrances, open windows, loading docks, foot traffic into buildings and the HVAC system. To thrive indoors, mold requires a food source, proper temperature, and humidity to foster its growth.

There will also be mold spores present in "normal" outdoor environments. In any environment, excess mold growth may arise as a result of excess moisture. Indoors this may indicate water leaks or high indoor humidity.

TEC conducted site-specific mold sampling outside to obtain a baseline spore count. This baseline was compared to inside mold spore counts at the designated sampling locations.

Interior spore counts above baseline readings, may indicate internal sources of mold. This would indicate a requirement for further investigation and potential mitigation.

None of the other results from the fourteen sampling locations at Alexandira City High School were indicative of mold issues. Mold analytical results can be found in Appendix A.

5. Radon Gas Sampling Results

Radon forms as the result of the radioactive decay of uranium. Uranium is a naturally occurring radioactive by product that occurs when rock and soil breaks down. Some building materials, such as granite, may be a source of radon. Sampling areas were provided by ACPS. This did not allow for TEC to utilize the sampling protocol provided by Air Chek for performing a comprehensive survey. Air Chek Radon Test Kits collection times were a minimum of 72 hours. Test kits were then retrieved and shipped to Air Chek Inc. located in Mills River, NC. Air Chek laboratories are National Institute of Standards and Technology's (NIST) National Voluntary Laboratory Accreditation Program (NVLAP), and American Industrial Hygiene Association (AIHA) for Environmental Microbial Laboratory Accreditation Program (EMLAP) certified. Analytical results can be found in Appendix B.

6. Formaldehyde Gas Sampling Results

Sources of formaldehyde are similar to sources of carbon monoxide. They include gas-burning engines and space heaters. Other sources include smoking, household products, pressed wood products, and adhesives. Analytical results can be found in Appendix D.

7. TO+15 (VOC) Sampling Results

Volatile organic compounds (VOCs), are organic chemicals emitted as gases. Carpets, flooring materials, cleaning agents, disinfectants, air fresheners, and vinyl furnishings, may all be sources of VOCs in indoor air. Analytical results can be found in Appendix E.

8. 4-pch Sampling Results

4-polycyclohexene is a common indoor air contaminant most commonly associated with " new-carpet" smell complaints. 4-pch is a byproduct of carpet manufacturing and has been associated with adverse health effects. None of the areas investigated during this study indictated elevated levels of pch. Analytical results can be found in Appendix C.

9. Multi-Gas Detector (MSA Altair Multi-gas) Readings

Multi-gas readings were taken at each location to document current conditions at the time of the sampling efforts and to monitor the environment between sampling locations. There were no exceedances in real-time during the IAQ investigation. Multi-gas results can be found below in Table 1.

Table 1

Multi-Gas Detector Readings				
Location	VOC	CO	OXYGEN	H2S
Reception Office	0.0	0.0	20.9	0.0
Cafeteria	0.0	0.0	20.9	0.0
Auditorium	0.0	0.0	20.9	0.0
B105	0.0	0.0	20.9	0.0
Auxiliary Gym Hall	0.0	0.0	20.9	0.0
E117	0.0	0.0	20.9	0.0
Main Gym	0.0	0.0	20.9	0.0
Hall E136	0.0	0.0	20.9	0.0
B212	0.0	0.0	20.9	0.0
Media Center	0.0	0.0	20.9	0.0
A205	0.0	0.0	20.9	0.0
C214	0.0	0.0	20.9	0.0
B333	0.0	0.0	20.9	0.0
Hall C309	0.0	0.0	20.9	0.0
A328	0.0	0.0	20.9	0.0

Table 2

Results of Analytes by Location						
Location	Radon	Mold		TO+15 VOCs	4PCH	Formaldehyde
		AVG: 77 F	AVG: 60 %			
Reception Office	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL
Cafeteria	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL
Auditorium	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL
B105	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL
Auxiliary Gym Hall	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL
E117	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL
Main Gym	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL
Hall E136	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL
B212	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL
Media Center	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL
A205	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL
C214	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL
B333	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL
Hall C309	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL
A328	< 4 pCi/L	Spore Count Normal		< RSL	< 6.5 ug/m3	< RSL

10. Quality Control Program

- TEC recognizes the importance of quality assurance (QA) and quality control (QC) measures as they relate to the performance of sample collection and processing.
- To ensure compliance with QA/QC measures, SOPs have been developed for field sample collection techniques, field sample screening procedures, multi-media sampling, and the accurate presentation of findings/reporting.
- All staff are provided these SOPs and are trained in these procedures before conducting work activities. TEC's Program Manager and the on-site PM/QCM will manage the quality control program.
- The PM will work closely with field technicians to ensure the success of the quality control program. All team members will receive copies of and abide by the quality control plan.
- Daily records will be kept of all operations, activities, and tests performed in the quality control program.
- All samples collected during this IAQ assessment were collected, processed, and shipped under the strictest chain of custody (CoC) guidelines.
- All samples were shipped for analysis by a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory.

Appendix A: Mold Analytical Results

HAYES MICROBIAL CONSULTING

#21030464

Analysis Report prepared for

Total Environmental Concepts, Inc.

8382 Terminal Road
Suite B
Lorton, VA 22079

Phone: **(571) 289-2173**

3330 King St.
Alexandria, VA 22302

Collected: **August 17, 2021**
Received: **August 18, 2021**
Reported: **August 18, 2021**

We would like to thank you for trusting Hayes Microbial for your analytical needs!
We received 16 samples by FedEx in good condition for this project on August 18th, 2021.

The results in this analysis pertain only to this job, collected on the stated date, and should not be used in the interpretation of any other job. This report may not be duplicated, except in full, without the written consent of Hayes Microbial Consulting, LLC..

This laboratory bears no responsibility for sample collection activities, analytical method limitations, or your use of the test results. Interpretation and use of test results are your responsibility. Any reference to health effects or interpretation of mold levels is strictly the opinion of Hayes Microbial. In no event, shall Hayes Microbial or any of its employees be liable for lost profits or any special, incidental or consequential damages arising out of the use of these test results.

Steve Hayes, BSMT(ASCP)
Laboratory Director
Hayes Microbial Consulting, LLC.

EPA Laboratory ID: VA01419

Lab ID: #188863

DPH License: #PH-0198

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3330 King St.
Alexandria, VA 22302

#21030464

Spore Trap
SOP - HMC#101

Sample Number	1	TC4315310		2	TC4315293		3	TC4315286		4	TC4315291	
Sample Name	TC Library			TC B212			TC C214			TC A205		
Sample Volume	75.00 liter			75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m³			13 spores/m³			13 spores/m³			13 spores/m³		
Background	2			2			2			2		
Fragments	ND			ND			ND			ND		
Organism	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**
Alternaria												
Ascospores	2	27	100.0%	3	40	60.0%	2	27	66.7%	1	13	100.0%
Aspergillus|Penicillium												
Basidiospores				1	13	20.0%						
Bipolaris|Drechslera												
Chaetomium												
Cladosporium				1	13	20.0%	1	13	33.3%			
Curvularia												
Epicoccum												
Fusarium												
Memnoniella												
Myxomycetes												
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Cercospora												
Total	2	27	100%	5	66	100%	3	40	100%	1	13	100%

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

Collected: **Aug 17, 2021** Received: **Aug 18, 2021** Reported: **Aug 18, 2021**

Project Analyst: Ramesh Poluri, PhD P. Ramesh Date: **08 - 18 - 2021**

Reviewed By: Steve Hayes, BSMT Stephen N. Hayes Date: **08 - 18 - 2021**

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#21030464

Spore Trap
SOP - HMC#101

Sample Number	5	TC4315285		6	TC4315309		7	TC4315287		8	TC4315303	
Sample Name	TC Cafeteria			TC B105			TC Reception			TC Auditorium		
Sample Volume	75.00 liter			75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m³			13 spores/m³			13 spores/m³			13 spores/m³		
Background	2			2			2			2		
Fragments	ND			ND			ND			ND		
Organism	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**
Alternaria												
Ascospores	1	13	100.0%	2	27	66.7%	2	27	66.7%	5	67	83.3%
Aspergillus|Penicillium												
Basidiospores				1	13	33.3%	1	13	33.3%	1	13	16.7%
Bipolaris|Drechslera												
Chaetomium												
Cladosporium												
Curvularia												
Epicoccum												
Fusarium												
Memnoniella												
Myxomycetes												
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Cercospora												
Total	1	13	100%	3	40	100%	3	40	100%	6	80	100%

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

Collected: **Aug 17, 2021** Received: **Aug 18, 2021** Reported: **Aug 18, 2021**

Project Analyst: Ramesh Poluri, PhD P. Ramesh Date: **08 - 18 - 2021**

Reviewed By: Steve Hayes, BSMT Stephen N. Hayes Date: **08 - 18 - 2021**

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Spore Trap
SOP - HMC#101

Sample Number	9	TC4315289		10	TC4315298		11	TC4315292		12	TC4315308	
Sample Name	TC Hallway E136			TC Main Gym E103			TC Hallway E112			TC E117		
Sample Volume	75.00 liter			75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m³			13 spores/m³			13 spores/m³			13 spores/m³		
Background	2			1			2			2		
Fragments	ND			ND			ND			ND		
Organism	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**
Alternaria												
Ascospores	1	13	50.0%	1	13	100.0%	2	27	50.0%	1	13	9.1%
Aspergillus|Penicillium										10	133	90.9%
Basidiospores	1	13	50.0%				1	13	25.0%			
Bipolaris|Drechslera												
Chaetomium												
Cladosporium							1	13	25.0%			
Curvularia												
Epicoccum												
Fusarium												
Memnoniella												
Myxomycetes												
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Cercospora												
Total	2	26	100%	1	13	100%	4	53	100%	11	146	100%

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

Collected: **Aug 17, 2021** Received: **Aug 18, 2021** Reported: **Aug 18, 2021**

Project Analyst: Ramesh Poluri, PhD P. Ramesh Date: **08 - 18 - 2021**

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Spore Trap
SOP - HMC#101

Sample Number	13	TC4315290		14	TC4315314		15	TC4315313		16	TC4315315	
Sample Name	TC Outside			TC B333			TC Hallway 311			TC A38		
Sample Volume	75.00 liter			75.00 liter			75.00 liter			75.00 liter		
Reporting Limit	13 spores/m³			13 spores/m³			13 spores/m³			13 spores/m³		
Background	2			2			2			2		
Fragments	ND			ND			ND			ND		
Organism	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**	**Raw Count**	**Count / m³**	**% of Total**
Alternaria												
Ascospores	1920	25600	71.3%	4	53	80.0%	2	27	100.0%	2	27	66.7%
Aspergillus|Penicillium	3	40	<1%									
Basidiospores	640	8533	23.8%	1	13	20.0%				1	13	33.3%
Bipolaris|Drechslera												
Chaetomium												
Cladosporium	128	1707	4.8%									
Curvularia												
Epicoccum												
Fusarium												
Memnoniella												
Myxomycetes	2	27	<1%									
Pithomyces												
Stachybotrys												
Stemphylium												
Torula												
Ulocladium												
Cercospora	1	13	<1%									
Total	2694	35920	100%	5	66	100%	2	27	100%	3	40	100%

Water Damage Indicator | Common Allergen | Slightly Higher than Baseline | Significantly Higher than Baseline | Ratio Abnormality

Collected: **Aug 17, 2021** Received: **Aug 18, 2021** Reported: **Aug 18, 2021**

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#21030464

Spore Trap Information

Reporting Limit	The Reporting Limit is the lowest number of spores that can be detected based on the total volume of the sample collected and the percentage of the slide that is counted. At Hayes Microbial, 100% of the slide is read so the LOD is based solely on the total volume. Raw spore counts that exceed 500 spores will be estimated.
Blanks	Results have not been corrected for field or laboratory blanks.
Background	The Background is the amount of debris that is present in the sample. This debris consists of skin cells, dirt, dust, pollen, drywall dust and other organic and non-organic matter. As the background density increases, the likelihood of spores, especially small spores such as those of Aspergillus and Penicillium may be obscured. The background is rated on a scale of 1 to 5 and each level is determined as follows: **NBD:** No background detected due to possible pump or cassette malfunction. Recollect sample. (Field Blanks will display NBD) **1 :** <5% of field occluded. No spores will be uncountable. **2 :** 5-25% of field occluded. **3 :** 25-75% of field occluded. **4 :** 75-90% of field occluded. **5 :** >90% of field occluded. Suggested recollection of sample.
Fragments	Fragments are small pieces of fungal mycelium or spores. They are not identifiable as to type and when present in very large numbers, may indicate the presence of mold amplification.
Control Comparisons	There are no national standards for the numbers of fungal spores that may be present in the indoor environment. As a general rule and guideline that is widely accepted in the indoor air quality field, the numbers and types of spores that are present in the indoor environment should not exceed those that are present outdoors at any given time. There will always be some mold spores present in "normal" indoor environments. The purpose of sampling and counting spores is to help determine whether an abnormal condition exists within the indoor environment and if it does, to help pinpoint the area of contamination. Spore counts should not be used as the sole determining factor of mold contamination. There are many factors that can cause anomalies in the comparison of indoor and outdoor samples due to the dynamic nature of both of those environments.
Water Damage Indicator Common Allergen Slightly Higher than Baseline Significantly Higher than Baseline Ratio Abnormality	**Blue:** These molds are commonly seen in conditions of prolonged water intrusion and usually indicate a problem. **Green:** Although all molds are potential allergens, these are the most common allergens that may be found indoors. **Orange:** The spore count is slightly higher than the outside count and may or may not indicate a source of contamination. **Red:** The spore count is significantly higher than the baseline count and probably indicates a source of contamination. **Violet:** The types of spores found indoors should be similar to the ones that were identified in the baseline sample. Significant increases (more than 25%) in the ratio of a particular spore type may indicate the presence of abnormal levels of mold, even if the total number of spores of that type is lower in the indoor environment than it was outdoors.
Color Coding	Fungi that are present in indoor samples at levels lower than 200 per cubic meter are not color coded on the report, unless they are one of the water damage indicators.

Karl Ford
Total Environmental Concepts, Inc.
8382 Terminal Road Suite B
Lorton, VA 22079
(571) 289-2173

3330 King St.
Alexandria, VA 22302

#21030464

Organism Descriptions

Ascospores

Habitat: A large group consisting of more than 3000 species of fungi. Common plant pathogens and outdoor numbers become very high following rain. Most of the genera are indistinguishable by spore trap analysis and are combined on the report.

Effects: Health affects are poorly studied, but many are likely to be allergenic.

Aspergillus|Penicillium

Habitat: The most common fungi isolated from the environment. Very common in soil and on decaying plant material. Are able to grow well indoors on a wide variety of substrates.

Effects: This group contains common allergens and many can cause hypersensitivity pneumonitis. They may cause extrinsic asthma, and many are opportunistic pathogens. Many species produce mycotoxins which may be associated with disease in humans and other animals. Toxin production is dependent on the species, the food source, competition with other organisms, and other environmental conditions.

Basidiospores

Habitat: A common group of Fungi that includes the mushrooms and bracket fungi. They are saprophytes and plant pathogens. In wet conditions they can cause structural damage to buildings.

Effects: Common allergens and are also associated with hypersensitivity pneumonitis.

Cercospora

Habitat: Found on wood and decaying plant matter.

Effects: Health effects are poorly studied.

Cladosporium

Habitat: One of the most common genera worldwide. Found in soil and plant debris and on the leaf surfaces of living plants. The outdoor numbers are lower in the winter and often relatively high in the summer, especially in high humidity. The outdoor numbers often spike in the late afternoon and evening. Indoors, it can be found growing on textiles, wood, sheetrock, moist window sills and in HVAC supply ducts.

Effects: A common allergen, producing more than 10 allergenic antigens and a common cause of hypersensitivity pneumonitis.

Myxomycetes

Habitat: Found on decaying plant material and as a plant pathogen.

Effects: Some allergenic properties reported, but generally pose no health concerns to humans.

TC williams HS

Total Environmental Concepts, Inc.

Placement Tech	Victoria	Sample Type	mold
Placement Date	8/17/2021	Email	KFord@tec1.pro
Address	3330 King St Alexandria		

Sample #	Location/ room	Flow Rate	Sampling Time	Pump Start Time	Pump End Time	Comments
TC4315310	TC [redacted] Library	10Lm	7.5L	1039	1045	60% 77°F
TC4315293	TC B212			1050	1057	
TC4315286	TC C214			1214	1221	
TC4315291	TC A205			1237	1244	
TC4315285	TC Cafeteria			1109	1116	
TC4315309	TC B105			1119	1126	
TC4315287	TC reception			1230	1237	
TC4315303	TC auditorium			1220	1227	
TC4315289	TC hallway E136			1208	1215	
TC4315298	TC main gym E103			1153	1201	
TC4315292	TC hallway E112			1130	1138	
TC4315308	TC E117			1143	1149	daycare
TC4315290	TC outside			1242	1249	
TC4315314	TC B333			1045	1051	
TC4315313	TC hallway 311			1106	1113	
TC4315315	TC A38			1126	1133	

Appendix B: Radon Analytical Results

Attention: P8184 / LEILA DEAN / TOTAL ENVIRONMENTAL CONCEPTS

Kit #: 9723588 Result: < 0.3 pCi/l
Location: (possible) Hall E136
9723608?
Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 11:00 am
Ended : 2021-08-20 at 12:00 pm
Hours/MST% : 73 hours 8.8% 70°F

Kit #: 9723589 Result: < 0.3 pCi/l
Location: Audio - 2

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 1:00 pm
Ended : 2021-08-20 at 1:00 pm
Hours/MST% : 72 hours 10.8% 70°F

Kit #: 9723590 Result: < 0.3 pCi/l
Location: Cafe - 2

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 12:00 pm
Ended : 2021-08-20 at 1:00 pm
Hours/MST% : 73 hours 10.6% 70°F

Kit #: 9723591 Result: < 0.3 pCi/l
Location: B 212

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 11:00 am
Ended : 2021-08-20 at 12:00 pm
Hours/MST% : 73 hours 11.5% 70°F

Kit #: 9723592 Result: < 0.3 pCi/l
Location: B 333

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 11:00 am
Ended : 2021-08-20 at 12:00 pm
Hours/MST% : 73 hours 12.6% 70°F

Kit #: 9723593 Result: < 0.3 pCi/l
Location: Hall - C311 - C309

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 11:00 am
Ended : 2021-08-20 at 12:00 pm
Hours/MST% : 73 hours 10.9% 70°F

Attention: P8184 / LEILA DEAN / TOTAL ENVIRONMENTAL CONCEPTS

Kit #: 9723594 Result: < 0.3 pCi/l
Location: C214

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 11:00 am
Ended : 2021-08-20 at 12:00 pm
Hours/MST% : 73 hours 9.6% 70°F

Kit #: 9723595 Result: < 0.3 pCi/l
Location: Reception

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 1:00 pm
Ended : 2021-08-20 at 11:00 am
Hours/MST% : 70 hours 10.9% 70°F

Kit #: 9723596 Result: < 0.3 pCi/l
Location: B105

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 11:00 am
Ended : 2021-08-20 at 1:00 pm
Hours/MST% : 74 hours 10.1% 70°F

Kit #: 9723597 Result: < 0.3 pCi/l
Location: Library-2

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 10:00 am
Ended : 2021-08-20 at 1:00 pm
Hours/MST% : 75 hours 11.5% 70°F

Kit #: 9723598 Result: < 0.3 pCi/l
Location: Travel Blank

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 10:00 am
Ended : 2021-08-20 at 12:00 pm
Hours/MST% : 74 hours 10.7% 70°F

Kit #: 9723599 Result: < 0.3 pCi/l
Location: Library-1

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 10:00 am
Ended : 2021-08-20 at 12:00 pm
Hours/MST% : 74 hours 10.9% 70°F

Attention: P8184 / LEILA DEAN / TOTAL ENVIRONMENTAL CONCEPTS

Kit #: 9723600 Result: < 0.3 pCi/l
Location: Library - B

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 10:00 am
Ended : 2021-08-20 at 1:00 pm
Hours/MST% : 75 hours 5.9% 70°F

Kit #: 9723801 Result: < 0.3 pCi/l
Location: Cafe - 1

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 12:00 pm
Ended : 2021-08-20 at 11:00 am
Hours/MST% : 71 hours 11.8% 70°F

Kit #: 9723802 Result: < 0.3 pCi/l
Location: main Gym - E103 - 1

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 11:00 am
Ended : 2021-08-20 at 11:00 am
Hours/MST% : 72 hours 14.5% 70°F

Kit #: 9723803 Result: < 0.3 pCi/l
Location: Main Gym - E103 - 2

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 11:00 am
Ended : 2021-08-20 at 11:00 am
Hours/MST% : 72 hours 13.9% 70°F

Kit #: 9723804 Result: 0.7 ± 0.3 pCi/l
Location: Daycare E117

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 11:00 am
Ended : 2021-08-20 at 12:00 pm
Hours/MST% : 73 hours 10.3% 70°F

Kit #: 9723806 Result: < 0.3 pCi/l
Location: Reception - D

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 1:00 pm
Ended : 2021-08-20 at 12:00 pm
Hours/MST% : 71 hours 11.1% 70°F

** LABORATORY ANALYSIS REPORT **

Attention: P8184 / LEILA DEAN / TOTAL ENVIRONMENTAL CONCEPTS

Kit #: 9723582 Result: < 0.3 pCi/l
Location: Audio-1

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 1:00 pm
Ended : 2021-08-20 at 12:00 pm
Hours/MST% : 71 hours 13.2% 70°F

Kit #: 9723585 Result: < 0.3 pCi/l
Location: A 205

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 11:00 am
Ended : 2021-08-20 at 12:00 pm
Hours/MST% : 73 hours 10.9% 70°F

Kit #: 9723586 Result: < 0.3 pCi/l
Location: Hall - 612 - Gym

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 11:00 am
Ended : 2021-08-20 at 11:00 am
Hours/MST% : 72 hours 10.1% 70°F

Kit #: 9723587 Result: < 0.3 pCi/l
Location: Library - D

Tk W
,

Analysis Note :
Analyzed : 2021-08-23 at 11:00 am
Started : 2021-08-17 at 11:00 am
Ended : 2021-08-20 at 12:00 pm
Hours/MST% : 73 hours 11.4% 70°F

Air Chek 1936 Butler Bridge Rd, Mills River, NC 28759-3892 Phone: (828) 684-0893 Fax: (828) 684-8498

Total Environmental Concepts, inc.

Placement Tech	Maggie S	Sample Type	Radon	Pickup Tech	Maggie S
Placement Date	8/17/21	Sample Media		Pickup Date	8/20/21
Address				Email	Kford@teci.pro

Alert	Location/ room	SQFT >3000	HVAC Y/N	Windows Y/N	Fans Y/N	Start	Finish	Comment
TC9723599	TC Library-1		Y	Y	N	10:17	12:33	
TC9723597	TC Library-2			Y	N	10:17	13:02	
TC9723587D	TC Library-D			Y	N	10:17	12:15	
TC9723600B	TC Library-B			Y	N	10:17	1300	
TC9723591	TC B212			Y	N	10:37	12:05	
TC9723594	TC C214			Y	N	10:45	12:00	
TC9723585	TC A205			Y	N	10:50	12:10	
TC9723592	TC B333			Y	N	11:00	12:15	
TC9723593	TC Hall C311 C309			N	N	11:11	12:20	
TC9723596	TC B105			Y	N	11:55	13:00	
TC9723801	TC Cafeteria-1			N	N	11:50	11:55	
TC9723586	TC Hall E12 GYM			Y	N	11:30	11:53	
TC9723802	TC Main GYM E103-1			Y	N	11:37	11:50	
TC9723804	TC Daycare E117			N	N	11:20	12:06	
TC9723803	TC Main GYM E103-2			Y	N	11:39	11:50	
TC9723598	TC Hall C110 E136			N	N	11:44	12:00	
TC9723590	TC Cafeteria-2			N	N	12:35	1300	
TC9723588	TC Auditorium-1			N	N	12:42	12:00	
TC9723589	TC Auditorium-2			N	N	12:44	1300	
TC9723595	TC Reception			N	N	12:50	11:55	
TC9723806D	TC ReceptionD		↓	N	N	12:50	11:50	
TC	TC Travel Blank		—	—	—	1900	1900	

Appendix C: VOCs (TO+15) Analytical Results

PHASE SEPARATION SCIENCE

6630 Baltimore National Pike
Baltimore, MD 21228
410-747-8770
800-932-9047
www.phaseonline.com

Certificate of Analysis

Project Name: ACPS IAQ Testing
PSS Project No.: 21081829

August 26, 2021

Karl Ford
Total Environmental Concepts - Lorton
8382 Terminal Road, Suite B
Lorton, VA 22079

Reference: PSS Project No: **21081829**
Project Name: ACPS IAQ Testing
Project Location: T. C. Williams School
Project ID.: 4920002

Dear Karl Ford:

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Project number(s) **21081829**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on September 22, 2021, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal
Laboratory Manager

PHASE SEPARATION SCIENCE

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Baltimore, MD 21228
410-747-8770
800-932-9047
www.phaseonline.com

Explanation of Qualifiers

Project Name: ACPS IAQ Testing

PSS Project No.: 21081829

Project ID: 4920002

The following samples were received under chain of custody by Phase Separation Science (PSS) on 08/18/2021 at 03:00 pm

PSS Sample ID	Sample ID	Matrix	Date/Time Collected
21081829-001	TC - Class E117	AIR	08/17/21 18:36
21081829-002	TC - Hall E112	AIR	08/17/21 18:40
21081829-003	TC - Gym	AIR	08/17/21 18:24
21081829-004	TC - Auditorium	AIR	08/17/21 18:50
21081829-005	TC - Office A110	AIR	08/17/21 19:08
21081829-006	TC - Cafeteria	AIR	08/17/21 18:55
21081829-007	TC - Class B105	AIR	08/17/21 19:03
21081829-008	TC - Media Center	AIR	08/17/21 17:40
21081829-009	TC - Class A205	AIR	08/17/21 18:09
21081829-010	TC - Class C214	AIR	08/17/21 18:15
21081829-011	TC - Class B212	AIR	08/17/21 18:21
21081829-012	TC - Class B333	AIR	08/17/21 17:52
21081829-013	TC - Hall C309	AIR	08/17/21 17:59
21081829-014	TC - Class A328	AIR	08/17/21 18:02
21081829-015	TC - Outdoor	AIR	08/17/21 19:14

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

PHASE SEPARATION SCIENCE

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www.phaseonline.com

Explanation of Qualifiers

Project Name: ACPS IAQ Testing

PSS Project No.: 21081829

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

Maryland spectral Services

Analytical Chemistry Services

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com
VELAP ID 460040

26 August 2021

Amber Confer
Phase Separation Science, Inc.
6630 Baltimore National Pike, Route 40 West
Baltimore, MD 21228
RE: T.C. Williams School

Enclosed are the results of analyses for samples received by the laboratory on 08/19/21 13:25.

Maryland Spectral Services, Inc. is a TNI 2009 Standard accredited laboratory and as such, all analyses performed at Maryland Spectral Services included in this report are 2009 TNI certified except as indicated at the end of this report. Please visit our website at www.mdspectral.com for a complete listing of our TNI 2009 Standard accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rabecka Koons
Quality Assurance Officer

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Analytical Results

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TC-CLASS E117	21081829-001	1081917-01	Vapor	08/17/21 18:36	08/19/21 13:25
TC-HALL E112	21081829-002	1081917-02	Vapor	08/17/21 18:40	08/19/21 13:25
TC-GYM	21081829-003	1081917-03	Vapor	08/17/21 18:24	08/19/21 13:25
TC-AUDITORIUM	21081829-004	1081917-04	Vapor	08/17/21 18:50	08/19/21 13:25
TC-OFFICE A110	21081829-005	1081917-05	Vapor	08/17/21 19:08	08/19/21 13:25
TC-CAFETERIA	21081829-006	1081917-06	Vapor	08/17/21 18:55	08/19/21 13:25
TC-CLASS B105	21081829-007	1081917-07	Vapor	08/17/21 19:03	08/19/21 13:25
TC-MEDIA CENTER	21081829-008	1081917-08	Vapor	08/17/21 17:40	08/19/21 13:25
TC-CLASS A205	21081829-009	1081917-09	Vapor	08/17/21 18:09	08/19/21 13:25
TC-CLASS C214	21081829-010	1081917-10	Vapor	08/17/21 18:15	08/19/21 13:25
TC-CLASS B212	21081829-011	1081917-11	Vapor	08/17/21 18:21	08/19/21 13:25
TC-CLASS B333	21081829-012	1081917-12	Vapor	08/17/21 17:52	08/19/21 13:25
TC-HALL C309	21081829-013	1081917-13	Vapor	08/17/21 17:59	08/19/21 13:25
TC-CLASS A328	21081829-014	1081917-14	Vapor	08/17/21 18:02	08/19/21 13:25
TC-OUTDOOR	21081829-015	1081917-15	Vapor	08/17/21 19:14	08/19/21 13:25

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

All analyses performed at Maryland Spectral Services included in the report are TNI certified except as indicated at the end of the report.

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CLASS E117
21081829-001
1081917-01 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**25.8**		ug/m³	2.40	2.40	1	08/19/21	08/19/21 17:28	WB
Benzene	**0.29**	J	ug/m³	0.64	0.16	1	08/19/21	08/19/21 17:28	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/19/21	08/19/21 17:28	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 17:28	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/19/21	08/19/21 17:28	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/19/21	08/19/21 17:28	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/19/21	08/19/21 17:28	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/19/21	08/19/21 17:28	WB
Carbon tetrachloride	**0.44**	J	ug/m³	1.30	0.33	1	08/19/21	08/19/21 17:28	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 17:28	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/19/21	08/19/21 17:28	WB
Chloroform	**0.34**	J	ug/m³	0.97	0.24	1	08/19/21	08/19/21 17:28	WB
Chloromethane	**3.35**		ug/m³	0.41	0.10	1	08/19/21	08/19/21 17:28	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/19/21	08/19/21 17:28	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/19/21	08/19/21 17:28	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 17:28	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 17:28	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 17:28	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 17:28	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 17:28	WB
Dichlorodifluoromethane	**2.27**		ug/m³	0.99	0.99	1	08/19/21	08/19/21 17:28	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 17:28	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 17:28	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 17:28	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 17:28	WB
trans-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 17:28	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 17:28	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 17:28	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 17:28	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/19/21	08/19/21 17:28	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/19/21	08/19/21 17:28	WB
Ethylbenzene	**0.26**	J	ug/m³	0.87	0.22	1	08/19/21	08/19/21 17:28	WB
4-Ethyltoluene	**0.84**	J	ug/m³	0.98	0.25	1	08/19/21	08/19/21 17:28	WB
Freon 113	**0.54**	J	ug/m³	1.50	0.38	1	08/19/21	08/19/21 17:28	WB

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Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CLASS E117
21081829-001
1081917-01 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 114	ND		ug/m³	1.40	1.40	1	08/19/21	08/19/21 17:28	WB
n-Heptane	**0.66**	J	ug/m³	0.82	0.21	1	08/19/21	08/19/21 17:28	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/19/21	08/19/21 17:28	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/19/21	08/19/21 17:28	WB
2-Hexanone	**0.33**	J	ug/m³	0.82	0.15	1	08/19/21	08/19/21 17:28	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/19/21	08/19/21 17:28	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/19/21	08/19/21 17:28	WB
Methylene chloride	ND		ug/m³	18.0	18.0	1	08/19/21	08/19/21 17:28	WB
Methyl ethyl ketone (2-Butanone)	**3.60**		ug/m³	0.59	0.34	1	08/19/21	08/19/21 17:28	WB
Methyl isobutyl ketone	**1.31**		ug/m³	0.82	0.82	1	08/19/21	08/19/21 17:28	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/19/21	08/19/21 17:28	WB
Propene	ND		ug/m³	0.34	0.34	1	08/19/21	08/19/21 17:28	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/19/21	08/19/21 17:28	WB
Styrene	**0.30**	J	ug/m³	0.85	0.15	1	08/19/21	08/19/21 17:28	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 17:28	WB
Tetrachloroethene	ND		ug/m³	1.40	0.70	1	08/19/21	08/19/21 17:28	WB
Tetrahydrofuran	**3.75**		ug/m³	0.59	0.15	1	08/19/21	08/19/21 17:28	WB
Toluene	**1.62**		ug/m³	0.75	0.35	1	08/19/21	08/19/21 17:28	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/19/21	08/19/21 17:28	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 17:28	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 17:28	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 17:28	WB
Trichlorofluoromethane (Freon 11)	**1.46**		ug/m³	1.10	0.28	1	08/19/21	08/19/21 17:28	WB
1,2,4-Trimethylbenzene	**0.93**	J	ug/m³	0.98	0.25	1	08/19/21	08/19/21 17:28	WB
1,3,5-Trimethylbenzene	**0.29**	J	ug/m³	0.98	0.25	1	08/19/21	08/19/21 17:28	WB
2,2,4-Trimethylpentane	**0.42**	J	ug/m³	0.93	0.23	1	08/19/21	08/19/21 17:28	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/19/21	08/19/21 17:28	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 17:28	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/19/21	08/19/21 17:28	WB
o-Xylene	**0.48**	J	ug/m³	0.87	0.22	1	08/19/21	08/19/21 17:28	WB
m- & p-Xylenes	**1.00**	J	ug/m³	1.70	0.43	1	08/19/21	08/19/21 17:28	WB
Surrogate: 4-Bromofluorobenzene			*73-115*	*98 %*		*08/19/21*		*08/19/21 17:28*	

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Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-HALL E112
21081829-002
1081917-02 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**15.6**		ug/m³	2.40	2.40	1	08/19/21	08/19/21 18:02	WB
Benzene	**0.22**	J	ug/m³	0.64	0.16	1	08/19/21	08/19/21 18:02	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/19/21	08/19/21 18:02	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 18:02	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/19/21	08/19/21 18:02	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/19/21	08/19/21 18:02	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/19/21	08/19/21 18:02	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/19/21	08/19/21 18:02	WB
Carbon tetrachloride	**0.38**	J	ug/m³	1.30	0.33	1	08/19/21	08/19/21 18:02	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 18:02	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/19/21	08/19/21 18:02	WB
Chloroform	ND		ug/m³	0.97	0.24	1	08/19/21	08/19/21 18:02	WB
Chloromethane	**1.30**		ug/m³	0.41	0.10	1	08/19/21	08/19/21 18:02	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/19/21	08/19/21 18:02	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/19/21	08/19/21 18:02	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 18:02	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 18:02	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 18:02	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 18:02	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 18:02	WB
Dichlorodifluoromethane	**2.18**		ug/m³	0.99	0.99	1	08/19/21	08/19/21 18:02	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 18:02	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 18:02	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 18:02	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 18:02	WB
trans-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 18:02	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 18:02	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 18:02	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 18:02	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/19/21	08/19/21 18:02	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/19/21	08/19/21 18:02	WB
Ethylbenzene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 18:02	WB
4-Ethyltoluene	**0.64**	J	ug/m³	0.98	0.25	1	08/19/21	08/19/21 18:02	WB
Freon 113	**0.46**	J	ug/m³	1.50	0.38	1	08/19/21	08/19/21 18:02	WB

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www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-HALL E112
21081829-002
1081917-02 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 114	ND		ug/m³	1.40	1.40	1	08/19/21	08/19/21 18:02	WB
n-Heptane	**0.37**	J	ug/m³	0.82	0.21	1	08/19/21	08/19/21 18:02	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/19/21	08/19/21 18:02	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/19/21	08/19/21 18:02	WB
2-Hexanone	ND		ug/m³	0.82	0.15	1	08/19/21	08/19/21 18:02	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/19/21	08/19/21 18:02	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/19/21	08/19/21 18:02	WB
Methylene chloride	ND		ug/m³	18.0	18.0	1	08/19/21	08/19/21 18:02	WB
Methyl ethyl ketone (2-Butanone)	**1.65**		ug/m³	0.59	0.34	1	08/19/21	08/19/21 18:02	WB
Methyl isobutyl ketone	ND		ug/m³	0.82	0.82	1	08/19/21	08/19/21 18:02	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/19/21	08/19/21 18:02	WB
Propene	ND		ug/m³	0.34	0.34	1	08/19/21	08/19/21 18:02	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/19/21	08/19/21 18:02	WB
Styrene	**0.21**	J	ug/m³	0.85	0.15	1	08/19/21	08/19/21 18:02	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 18:02	WB
Tetrachloroethene	ND		ug/m³	1.40	0.70	1	08/19/21	08/19/21 18:02	WB
Tetrahydrofuran	**2.06**		ug/m³	0.59	0.15	1	08/19/21	08/19/21 18:02	WB
Toluene	**1.28**		ug/m³	0.75	0.35	1	08/19/21	08/19/21 18:02	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/19/21	08/19/21 18:02	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 18:02	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 18:02	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 18:02	WB
Trichlorofluoromethane (Freon 11)	**1.35**		ug/m³	1.10	0.28	1	08/19/21	08/19/21 18:02	WB
1,2,4-Trimethylbenzene	**0.69**	J	ug/m³	0.98	0.25	1	08/19/21	08/19/21 18:02	WB
1,3,5-Trimethylbenzene	**0.25**	J	ug/m³	0.98	0.25	1	08/19/21	08/19/21 18:02	WB
2,2,4-Trimethylpentane	**0.33**	J	ug/m³	0.93	0.23	1	08/19/21	08/19/21 18:02	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/19/21	08/19/21 18:02	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 18:02	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/19/21	08/19/21 18:02	WB
o-Xylene	**0.30**	J	ug/m³	0.87	0.22	1	08/19/21	08/19/21 18:02	WB
m- & p-Xylenes	**0.78**	J	ug/m³	1.70	0.43	1	08/19/21	08/19/21 18:02	WB
Surrogate: 4-Bromofluorobenzene		*73-115*		*99 %*		*08/19/21*		*08/19/21 18:02*	

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Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-GYM
21081829-003
1081917-03 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**16.8**		ug/m³	2.40	2.40	1	08/19/21	08/19/21 18:36	WB
Benzene	**0.22**	J	ug/m³	0.64	0.16	1	08/19/21	08/19/21 18:36	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/19/21	08/19/21 18:36	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 18:36	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/19/21	08/19/21 18:36	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/19/21	08/19/21 18:36	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/19/21	08/19/21 18:36	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/19/21	08/19/21 18:36	WB
Carbon tetrachloride	**0.44**	J	ug/m³	1.30	0.33	1	08/19/21	08/19/21 18:36	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 18:36	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/19/21	08/19/21 18:36	WB
Chloroform	ND		ug/m³	0.97	0.24	1	08/19/21	08/19/21 18:36	WB
Chloromethane	**1.22**		ug/m³	0.41	0.10	1	08/19/21	08/19/21 18:36	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/19/21	08/19/21 18:36	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/19/21	08/19/21 18:36	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 18:36	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 18:36	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 18:36	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 18:36	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 18:36	WB
Dichlorodifluoromethane	**2.08**		ug/m³	0.99	0.99	1	08/19/21	08/19/21 18:36	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 18:36	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 18:36	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 18:36	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 18:36	WB
trans-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 18:36	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 18:36	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 18:36	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 18:36	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/19/21	08/19/21 18:36	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/19/21	08/19/21 18:36	WB
Ethylbenzene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 18:36	WB
4-Ethyltoluene	**0.29**	J	ug/m³	0.98	0.25	1	08/19/21	08/19/21 18:36	WB
Freon 113	**0.46**	J	ug/m³	1.50	0.38	1	08/19/21	08/19/21 18:36	WB

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1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-GYM
21081829-003
1081917-03 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 114	ND		ug/m³	1.40	1.40	1	08/19/21	08/19/21 18:36	WB
n-Heptane	**0.45**	J	ug/m³	0.82	0.21	1	08/19/21	08/19/21 18:36	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/19/21	08/19/21 18:36	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/19/21	08/19/21 18:36	WB
2-Hexanone	ND		ug/m³	0.82	0.15	1	08/19/21	08/19/21 18:36	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/19/21	08/19/21 18:36	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/19/21	08/19/21 18:36	WB
Methylene chloride	**35.3**	L	ug/m³	18.0	18.0	1	08/19/21	08/19/21 18:36	WB
Methyl ethyl ketone (2-Butanone)	**2.42**		ug/m³	0.59	0.34	1	08/19/21	08/19/21 18:36	WB
Methyl isobutyl ketone	ND		ug/m³	0.82	0.82	1	08/19/21	08/19/21 18:36	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/19/21	08/19/21 18:36	WB
Propene	ND		ug/m³	0.34	0.34	1	08/19/21	08/19/21 18:36	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/19/21	08/19/21 18:36	WB
Styrene	**0.21**	J	ug/m³	0.85	0.15	1	08/19/21	08/19/21 18:36	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 18:36	WB
Tetrachloroethene	ND		ug/m³	1.40	0.70	1	08/19/21	08/19/21 18:36	WB
Tetrahydrofuran	ND		ug/m³	0.59	0.15	1	08/19/21	08/19/21 18:36	WB
Toluene	**1.02**		ug/m³	0.75	0.35	1	08/19/21	08/19/21 18:36	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/19/21	08/19/21 18:36	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 18:36	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 18:36	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 18:36	WB
Trichlorofluoromethane (Freon 11)	**1.18**		ug/m³	1.10	0.28	1	08/19/21	08/19/21 18:36	WB
1,2,4-Trimethylbenzene	**0.29**	J	ug/m³	0.98	0.25	1	08/19/21	08/19/21 18:36	WB
1,3,5-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 18:36	WB
2,2,4-Trimethylpentane	**0.23**	J	ug/m³	0.93	0.23	1	08/19/21	08/19/21 18:36	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/19/21	08/19/21 18:36	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 18:36	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/19/21	08/19/21 18:36	WB
o-Xylene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 18:36	WB
m- & p-Xylenes	**0.52**	J	ug/m³	1.70	0.43	1	08/19/21	08/19/21 18:36	WB
Surrogate: 4-Bromofluorobenzene			*73-115*	*100 %*		*08/19/21*		*08/19/21 18:36*	

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Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-AUDITORIUM
21081829-004
1081917-04 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**8.55**		ug/m³	2.40	2.40	1	08/19/21	08/19/21 19:11	WB
Benzene	ND		ug/m³	0.64	0.16	1	08/19/21	08/19/21 19:11	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/19/21	08/19/21 19:11	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 19:11	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/19/21	08/19/21 19:11	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/19/21	08/19/21 19:11	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/19/21	08/19/21 19:11	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/19/21	08/19/21 19:11	WB
Carbon tetrachloride	**0.38**	J	ug/m³	1.30	0.33	1	08/19/21	08/19/21 19:11	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 19:11	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/19/21	08/19/21 19:11	WB
Chloroform	ND		ug/m³	0.97	0.24	1	08/19/21	08/19/21 19:11	WB
Chloromethane	**1.03**		ug/m³	0.41	0.10	1	08/19/21	08/19/21 19:11	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/19/21	08/19/21 19:11	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/19/21	08/19/21 19:11	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 19:11	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 19:11	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 19:11	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 19:11	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 19:11	WB
Dichlorodifluoromethane	**2.13**		ug/m³	0.99	0.99	1	08/19/21	08/19/21 19:11	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 19:11	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 19:11	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 19:11	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 19:11	WB
trans-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 19:11	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 19:11	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 19:11	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 19:11	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/19/21	08/19/21 19:11	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/19/21	08/19/21 19:11	WB
Ethylbenzene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 19:11	WB
4-Ethyltoluene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 19:11	WB

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www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-AUDITORIUM
21081829-004
1081917-04 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 113	**0.54**	J	ug/m³	1.50	0.38	1	08/19/21	08/19/21 19:11	WB
Freon 114	ND		ug/m³	1.40	1.40	1	08/19/21	08/19/21 19:11	WB
n-Heptane	ND		ug/m³	0.82	0.21	1	08/19/21	08/19/21 19:11	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/19/21	08/19/21 19:11	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/19/21	08/19/21 19:11	WB
2-Hexanone	ND		ug/m³	0.82	0.15	1	08/19/21	08/19/21 19:11	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/19/21	08/19/21 19:11	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/19/21	08/19/21 19:11	WB
Methylene chloride	ND		ug/m³	18.0	18.0	1	08/19/21	08/19/21 19:11	WB
Methyl ethyl ketone (2-Butanone)	**0.77**		ug/m³	0.59	0.34	1	08/19/21	08/19/21 19:11	WB
Methyl isobutyl ketone	ND		ug/m³	0.82	0.82	1	08/19/21	08/19/21 19:11	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/19/21	08/19/21 19:11	WB
Propene	ND		ug/m³	0.34	0.34	1	08/19/21	08/19/21 19:11	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/19/21	08/19/21 19:11	WB
Styrene	ND		ug/m³	0.85	0.15	1	08/19/21	08/19/21 19:11	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 19:11	WB
Tetrachloroethene	ND		ug/m³	1.40	0.70	1	08/19/21	08/19/21 19:11	WB
Tetrahydrofuran	ND		ug/m³	0.59	0.15	1	08/19/21	08/19/21 19:11	WB
Toluene	**0.60**	J	ug/m³	0.75	0.35	1	08/19/21	08/19/21 19:11	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/19/21	08/19/21 19:11	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 19:11	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 19:11	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 19:11	WB
Trichlorofluoromethane (Freon 11)	**1.24**		ug/m³	1.10	0.28	1	08/19/21	08/19/21 19:11	WB
1,2,4-Trimethylbenzene	**0.29**	J	ug/m³	0.98	0.25	1	08/19/21	08/19/21 19:11	WB
1,3,5-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 19:11	WB
2,2,4-Trimethylpentane	ND		ug/m³	0.93	0.23	1	08/19/21	08/19/21 19:11	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/19/21	08/19/21 19:11	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 19:11	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/19/21	08/19/21 19:11	WB
o-Xylene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 19:11	WB
m- & p-Xylenes	**0.43**	J	ug/m³	1.70	0.43	1	08/19/21	08/19/21 19:11	WB
Surrogate: 4-Bromofluorobenzene			*73-115*	*98 %*		*08/19/21*		*08/19/21 19:11*	

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Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-OFFICE A110
21081829-005
1081917-05 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**17.4**		ug/m³	2.40	2.40	1	08/19/21	08/19/21 19:45	WB
Benzene	**0.19**	J	ug/m³	0.64	0.16	1	08/19/21	08/19/21 19:45	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/19/21	08/19/21 19:45	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 19:45	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/19/21	08/19/21 19:45	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/19/21	08/19/21 19:45	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/19/21	08/19/21 19:45	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/19/21	08/19/21 19:45	WB
Carbon tetrachloride	**0.50**	J	ug/m³	1.30	0.33	1	08/19/21	08/19/21 19:45	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 19:45	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/19/21	08/19/21 19:45	WB
Chloroform	**0.34**	J	ug/m³	0.97	0.24	1	08/19/21	08/19/21 19:45	WB
Chloromethane	**1.34**		ug/m³	0.41	0.10	1	08/19/21	08/19/21 19:45	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/19/21	08/19/21 19:45	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/19/21	08/19/21 19:45	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 19:45	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 19:45	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 19:45	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 19:45	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 19:45	WB
Dichlorodifluoromethane	**2.03**		ug/m³	0.99	0.99	1	08/19/21	08/19/21 19:45	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 19:45	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 19:45	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 19:45	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 19:45	WB
trans-1,2-Dichloroethene	**0.36**	J	ug/m³	0.79	0.20	1	08/19/21	08/19/21 19:45	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 19:45	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 19:45	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 19:45	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/19/21	08/19/21 19:45	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/19/21	08/19/21 19:45	WB
Ethylbenzene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 19:45	WB
4-Ethyltoluene	**0.25**	J	ug/m³	0.98	0.25	1	08/19/21	08/19/21 19:45	WB
Freon 113	**0.54**	J	ug/m³	1.50	0.38	1	08/19/21	08/19/21 19:45	WB

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Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-OFFICE A110
21081829-005
1081917-05 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 114	ND		ug/m³	1.40	1.40	1	08/19/21	08/19/21 19:45	WB
n-Heptane	**0.41**	J	ug/m³	0.82	0.21	1	08/19/21	08/19/21 19:45	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/19/21	08/19/21 19:45	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/19/21	08/19/21 19:45	WB
2-Hexanone	ND		ug/m³	0.82	0.15	1	08/19/21	08/19/21 19:45	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/19/21	08/19/21 19:45	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/19/21	08/19/21 19:45	WB
Methylene chloride	ND		ug/m³	18.0	18.0	1	08/19/21	08/19/21 19:45	WB
Methyl ethyl ketone (2-Butanone)	**1.27**		ug/m³	0.59	0.34	1	08/19/21	08/19/21 19:45	WB
Methyl isobutyl ketone	ND		ug/m³	0.82	0.82	1	08/19/21	08/19/21 19:45	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/19/21	08/19/21 19:45	WB
Propene	ND		ug/m³	0.34	0.34	1	08/19/21	08/19/21 19:45	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/19/21	08/19/21 19:45	WB
Styrene	**0.21**	J	ug/m³	0.85	0.15	1	08/19/21	08/19/21 19:45	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 19:45	WB
Tetrachloroethene	**2.78**		ug/m³	1.40	0.70	1	08/19/21	08/19/21 19:45	WB
Tetrahydrofuran	ND		ug/m³	0.59	0.15	1	08/19/21	08/19/21 19:45	WB
Toluene	**0.98**		ug/m³	0.75	0.35	1	08/19/21	08/19/21 19:45	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/19/21	08/19/21 19:45	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 19:45	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 19:45	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 19:45	WB
Trichlorofluoromethane (Freon 11)	**1.18**		ug/m³	1.10	0.28	1	08/19/21	08/19/21 19:45	WB
1,2,4-Trimethylbenzene	**0.25**	J	ug/m³	0.98	0.25	1	08/19/21	08/19/21 19:45	WB
1,3,5-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 19:45	WB
2,2,4-Trimethylpentane	ND		ug/m³	0.93	0.23	1	08/19/21	08/19/21 19:45	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/19/21	08/19/21 19:45	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 19:45	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/19/21	08/19/21 19:45	WB
o-Xylene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 19:45	WB
m- & p-Xylenes	**0.52**	J	ug/m³	1.70	0.43	1	08/19/21	08/19/21 19:45	WB
Surrogate: 4-Bromofluorobenzene			*73-115*	*98 %*			*08/19/21*	*08/19/21 19:45*	

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410-247-7600
www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CAFETERIA
21081829-006
1081917-06 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**15.9**		ug/m³	2.40	2.40	1	08/19/21	08/19/21 20:19	WB
Benzene	ND		ug/m³	0.64	0.16	1	08/19/21	08/19/21 20:19	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/19/21	08/19/21 20:19	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 20:19	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/19/21	08/19/21 20:19	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/19/21	08/19/21 20:19	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/19/21	08/19/21 20:19	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/19/21	08/19/21 20:19	WB
Carbon tetrachloride	**0.44**	J	ug/m³	1.30	0.33	1	08/19/21	08/19/21 20:19	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 20:19	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/19/21	08/19/21 20:19	WB
Chloroform	ND		ug/m³	0.97	0.24	1	08/19/21	08/19/21 20:19	WB
Chloromethane	**1.69**		ug/m³	0.41	0.10	1	08/19/21	08/19/21 20:19	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/19/21	08/19/21 20:19	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/19/21	08/19/21 20:19	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 20:19	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 20:19	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 20:19	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 20:19	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 20:19	WB
Dichlorodifluoromethane	**1.98**		ug/m³	0.99	0.99	1	08/19/21	08/19/21 20:19	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 20:19	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 20:19	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 20:19	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 20:19	WB
trans-1,2-Dichloroethene	**0.24**	J	ug/m³	0.79	0.20	1	08/19/21	08/19/21 20:19	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 20:19	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 20:19	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 20:19	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/19/21	08/19/21 20:19	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/19/21	08/19/21 20:19	WB
Ethylbenzene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 20:19	WB
4-Ethyltoluene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 20:19	WB
Freon 113	**0.54**	J	ug/m³	1.50	0.38	1	08/19/21	08/19/21 20:19	WB

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410-247-7600
www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CAFETERIA
21081829-006
1081917-06 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 114	ND		ug/m³	1.40	1.40	1	08/19/21	08/19/21 20:19	WB
n-Heptane	**0.25**	J	ug/m³	0.82	0.21	1	08/19/21	08/19/21 20:19	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/19/21	08/19/21 20:19	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/19/21	08/19/21 20:19	WB
2-Hexanone	ND		ug/m³	0.82	0.15	1	08/19/21	08/19/21 20:19	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/19/21	08/19/21 20:19	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/19/21	08/19/21 20:19	WB
Methylene chloride	ND		ug/m³	18.0	18.0	1	08/19/21	08/19/21 20:19	WB
Methyl ethyl ketone (2-Butanone)	**0.94**		ug/m³	0.59	0.34	1	08/19/21	08/19/21 20:19	WB
Methyl isobutyl ketone	ND		ug/m³	0.82	0.82	1	08/19/21	08/19/21 20:19	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/19/21	08/19/21 20:19	WB
Propene	ND		ug/m³	0.34	0.34	1	08/19/21	08/19/21 20:19	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/19/21	08/19/21 20:19	WB
Styrene	**0.30**	J	ug/m³	0.85	0.15	1	08/19/21	08/19/21 20:19	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 20:19	WB
Tetrachloroethene	ND		ug/m³	1.40	0.70	1	08/19/21	08/19/21 20:19	WB
Tetrahydrofuran	ND		ug/m³	0.59	0.15	1	08/19/21	08/19/21 20:19	WB
Toluene	**0.90**		ug/m³	0.75	0.35	1	08/19/21	08/19/21 20:19	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/19/21	08/19/21 20:19	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 20:19	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 20:19	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 20:19	WB
Trichlorofluoromethane (Freon 11)	**1.29**		ug/m³	1.10	0.28	1	08/19/21	08/19/21 20:19	WB
1,2,4-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 20:19	WB
1,3,5-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 20:19	WB
2,2,4-Trimethylpentane	ND		ug/m³	0.93	0.23	1	08/19/21	08/19/21 20:19	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/19/21	08/19/21 20:19	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 20:19	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/19/21	08/19/21 20:19	WB
o-Xylene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 20:19	WB
m- & p-Xylenes	**0.43**	J	ug/m³	1.70	0.43	1	08/19/21	08/19/21 20:19	WB
Surrogate: 4-Bromofluorobenzene			*73-115*	*99 %*			*08/19/21*	*08/19/21 20:19*	

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410-247-7600
www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CLASS B105
21081829-007
1081917-07 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**17.3**		ug/m³	2.40	2.40	1	08/19/21	08/19/21 20:53	WB
Benzene	**0.19**	J	ug/m³	0.64	0.16	1	08/19/21	08/19/21 20:53	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/19/21	08/19/21 20:53	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 20:53	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/19/21	08/19/21 20:53	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/19/21	08/19/21 20:53	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/19/21	08/19/21 20:53	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/19/21	08/19/21 20:53	WB
Carbon tetrachloride	**0.50**	J	ug/m³	1.30	0.33	1	08/19/21	08/19/21 20:53	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 20:53	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/19/21	08/19/21 20:53	WB
Chloroform	ND		ug/m³	0.97	0.24	1	08/19/21	08/19/21 20:53	WB
Chloromethane	**1.20**		ug/m³	0.41	0.10	1	08/19/21	08/19/21 20:53	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/19/21	08/19/21 20:53	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/19/21	08/19/21 20:53	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 20:53	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 20:53	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 20:53	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 20:53	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 20:53	WB
Dichlorodifluoromethane	**2.18**		ug/m³	0.99	0.99	1	08/19/21	08/19/21 20:53	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 20:53	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 20:53	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 20:53	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 20:53	WB
trans-1,2-Dichloroethene	**0.59**	J	ug/m³	0.79	0.20	1	08/19/21	08/19/21 20:53	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 20:53	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 20:53	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 20:53	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/19/21	08/19/21 20:53	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/19/21	08/19/21 20:53	WB
Ethylbenzene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 20:53	WB
4-Ethyltoluene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 20:53	WB
Freon 113	**0.54**	J	ug/m³	1.50	0.38	1	08/19/21	08/19/21 20:53	WB

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Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CLASS B105
21081829-007
1081917-07 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 114	ND		ug/m³	1.40	1.40	1	08/19/21	08/19/21 20:53	WB
n-Heptane	**0.33**	J	ug/m³	0.82	0.21	1	08/19/21	08/19/21 20:53	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/19/21	08/19/21 20:53	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/19/21	08/19/21 20:53	WB
2-Hexanone	ND		ug/m³	0.82	0.15	1	08/19/21	08/19/21 20:53	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/19/21	08/19/21 20:53	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/19/21	08/19/21 20:53	WB
Methylene chloride	ND		ug/m³	18.0	18.0	1	08/19/21	08/19/21 20:53	WB
Methyl ethyl ketone (2-Butanone)	**1.12**		ug/m³	0.59	0.34	1	08/19/21	08/19/21 20:53	WB
Methyl isobutyl ketone	ND		ug/m³	0.82	0.82	1	08/19/21	08/19/21 20:53	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/19/21	08/19/21 20:53	WB
Propene	ND		ug/m³	0.34	0.34	1	08/19/21	08/19/21 20:53	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/19/21	08/19/21 20:53	WB
Styrene	**0.30**	J	ug/m³	0.85	0.15	1	08/19/21	08/19/21 20:53	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 20:53	WB
Tetrachloroethene	ND		ug/m³	1.40	0.70	1	08/19/21	08/19/21 20:53	WB
Tetrahydrofuran	ND		ug/m³	0.59	0.15	1	08/19/21	08/19/21 20:53	WB
Toluene	**1.02**		ug/m³	0.75	0.35	1	08/19/21	08/19/21 20:53	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/19/21	08/19/21 20:53	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 20:53	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 20:53	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 20:53	WB
Trichlorofluoromethane (Freon 11)	**1.24**		ug/m³	1.10	0.28	1	08/19/21	08/19/21 20:53	WB
1,2,4-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 20:53	WB
1,3,5-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 20:53	WB
2,2,4-Trimethylpentane	ND		ug/m³	0.93	0.23	1	08/19/21	08/19/21 20:53	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/19/21	08/19/21 20:53	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 20:53	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/19/21	08/19/21 20:53	WB
o-Xylene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 20:53	WB
m- & p-Xylenes	**0.48**	J	ug/m³	1.70	0.43	1	08/19/21	08/19/21 20:53	WB
Surrogate: 4-Bromofluorobenzene			*73-115*	*99 %*			*08/19/21*	*08/19/21 20:53*	

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www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-MEDIA CENTER
21081829-008
1081917-08 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**14.4**		ug/m³	2.40	2.40	1	08/19/21	08/19/21 21:28	WB
Benzene	ND		ug/m³	0.64	0.16	1	08/19/21	08/19/21 21:28	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/19/21	08/19/21 21:28	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 21:28	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/19/21	08/19/21 21:28	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/19/21	08/19/21 21:28	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/19/21	08/19/21 21:28	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/19/21	08/19/21 21:28	WB
Carbon tetrachloride	**0.38**	J	ug/m³	1.30	0.33	1	08/19/21	08/19/21 21:28	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 21:28	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/19/21	08/19/21 21:28	WB
Chloroform	ND		ug/m³	0.97	0.24	1	08/19/21	08/19/21 21:28	WB
Chloromethane	**1.09**		ug/m³	0.41	0.10	1	08/19/21	08/19/21 21:28	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/19/21	08/19/21 21:28	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/19/21	08/19/21 21:28	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 21:28	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 21:28	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 21:28	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 21:28	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 21:28	WB
Dichlorodifluoromethane	**2.13**		ug/m³	0.99	0.99	1	08/19/21	08/19/21 21:28	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 21:28	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 21:28	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 21:28	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 21:28	WB
trans-1,2-Dichloroethene	**0.28**	J	ug/m³	0.79	0.20	1	08/19/21	08/19/21 21:28	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 21:28	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 21:28	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 21:28	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/19/21	08/19/21 21:28	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/19/21	08/19/21 21:28	WB
Ethylbenzene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 21:28	WB
4-Ethyltoluene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 21:28	WB
Freon 113	**0.46**	J	ug/m³	1.50	0.38	1	08/19/21	08/19/21 21:28	WB

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Rabecka Koons, Quality Assurance Officer

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1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-MEDIA CENTER
21081829-008
1081917-08 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 114	ND		ug/m³	1.40	1.40	1	08/19/21	08/19/21 21:28	WB
n-Heptane	ND		ug/m³	0.82	0.21	1	08/19/21	08/19/21 21:28	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/19/21	08/19/21 21:28	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/19/21	08/19/21 21:28	WB
2-Hexanone	ND		ug/m³	0.82	0.15	1	08/19/21	08/19/21 21:28	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/19/21	08/19/21 21:28	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/19/21	08/19/21 21:28	WB
Methylene chloride	ND		ug/m³	18.0	18.0	1	08/19/21	08/19/21 21:28	WB
Methyl ethyl ketone (2-Butanone)	**1.47**		ug/m³	0.59	0.34	1	08/19/21	08/19/21 21:28	WB
Methyl isobutyl ketone	ND		ug/m³	0.82	0.82	1	08/19/21	08/19/21 21:28	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/19/21	08/19/21 21:28	WB
Propene	ND		ug/m³	0.34	0.34	1	08/19/21	08/19/21 21:28	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/19/21	08/19/21 21:28	WB
Styrene	ND		ug/m³	0.85	0.15	1	08/19/21	08/19/21 21:28	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 21:28	WB
Tetrachloroethene	ND		ug/m³	1.40	0.70	1	08/19/21	08/19/21 21:28	WB
Tetrahydrofuran	ND		ug/m³	0.59	0.15	1	08/19/21	08/19/21 21:28	WB
Toluene	**0.60**	J	ug/m³	0.75	0.35	1	08/19/21	08/19/21 21:28	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/19/21	08/19/21 21:28	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 21:28	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 21:28	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 21:28	WB
Trichlorofluoromethane (Freon 11)	**1.18**		ug/m³	1.10	0.28	1	08/19/21	08/19/21 21:28	WB
1,2,4-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 21:28	WB
1,3,5-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 21:28	WB
2,2,4-Trimethylpentane	ND		ug/m³	0.93	0.23	1	08/19/21	08/19/21 21:28	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/19/21	08/19/21 21:28	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 21:28	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/19/21	08/19/21 21:28	WB
o-Xylene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 21:28	WB
m- & p-Xylenes	ND		ug/m³	1.70	0.43	1	08/19/21	08/19/21 21:28	WB
Surrogate: 4-Bromofluorobenzene			*73-115*	*98 %*		*08/19/21*		*08/19/21 21:28*	

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Analytical Results

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CLASS A205
21081829-009
1081917-09 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**12.8**		ug/m³	2.40	2.40	1	08/19/21	08/19/21 22:02	WB
Benzene	ND		ug/m³	0.64	0.16	1	08/19/21	08/19/21 22:02	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/19/21	08/19/21 22:02	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 22:02	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/19/21	08/19/21 22:02	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/19/21	08/19/21 22:02	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/19/21	08/19/21 22:02	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/19/21	08/19/21 22:02	WB
Carbon tetrachloride	**0.44**	J	ug/m³	1.30	0.33	1	08/19/21	08/19/21 22:02	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 22:02	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/19/21	08/19/21 22:02	WB
Chloroform	**2.05**		ug/m³	0.97	0.24	1	08/19/21	08/19/21 22:02	WB
Chloromethane	**1.01**		ug/m³	0.41	0.10	1	08/19/21	08/19/21 22:02	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/19/21	08/19/21 22:02	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/19/21	08/19/21 22:02	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 22:02	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 22:02	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 22:02	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 22:02	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 22:02	WB
Dichlorodifluoromethane	**2.08**		ug/m³	0.99	0.99	1	08/19/21	08/19/21 22:02	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 22:02	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 22:02	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 22:02	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 22:02	WB
trans-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 22:02	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 22:02	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 22:02	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 22:02	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/19/21	08/19/21 22:02	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/19/21	08/19/21 22:02	WB
Ethylbenzene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 22:02	WB
4-Ethyltoluene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 22:02	WB
Freon 113	**0.46**	J	ug/m³	1.50	0.38	1	08/19/21	08/19/21 22:02	WB

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Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CLASS A205
21081829-009
1081917-09 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 114	ND		ug/m³	1.40	1.40	1	08/19/21	08/19/21 22:02	WB
n-Heptane	ND		ug/m³	0.82	0.21	1	08/19/21	08/19/21 22:02	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/19/21	08/19/21 22:02	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/19/21	08/19/21 22:02	WB
2-Hexanone	ND		ug/m³	0.82	0.15	1	08/19/21	08/19/21 22:02	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/19/21	08/19/21 22:02	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/19/21	08/19/21 22:02	WB
Methylene chloride	ND		ug/m³	18.0	18.0	1	08/19/21	08/19/21 22:02	WB
Methyl ethyl ketone (2-Butanone)	**0.77**		ug/m³	0.59	0.34	1	08/19/21	08/19/21 22:02	WB
Methyl isobutyl ketone	ND		ug/m³	0.82	0.82	1	08/19/21	08/19/21 22:02	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/19/21	08/19/21 22:02	WB
Propene	ND		ug/m³	0.34	0.34	1	08/19/21	08/19/21 22:02	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/19/21	08/19/21 22:02	WB
Styrene	ND		ug/m³	0.85	0.15	1	08/19/21	08/19/21 22:02	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 22:02	WB
Tetrachloroethene	**6.51**		ug/m³	1.40	0.70	1	08/19/21	08/19/21 22:02	WB
Tetrahydrofuran	ND		ug/m³	0.59	0.15	1	08/19/21	08/19/21 22:02	WB
Toluene	**0.49**	J	ug/m³	0.75	0.35	1	08/19/21	08/19/21 22:02	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/19/21	08/19/21 22:02	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 22:02	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 22:02	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 22:02	WB
Trichlorofluoromethane (Freon 11)	**1.18**		ug/m³	1.10	0.28	1	08/19/21	08/19/21 22:02	WB
1,2,4-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 22:02	WB
1,3,5-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 22:02	WB
2,2,4-Trimethylpentane	ND		ug/m³	0.93	0.23	1	08/19/21	08/19/21 22:02	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/19/21	08/19/21 22:02	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 22:02	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/19/21	08/19/21 22:02	WB
o-Xylene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 22:02	WB
m- & p-Xylenes	ND		ug/m³	1.70	0.43	1	08/19/21	08/19/21 22:02	WB
Surrogate: 4-Bromofluorobenzene			*73-115*	*99 %*			*08/19/21*	*08/19/21 22:02*	

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Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CLASS C214
21081829-010
1081917-10 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**16.0**		ug/m³	2.40	2.40	1	08/19/21	08/19/21 22:36	WB
Benzene	ND		ug/m³	0.64	0.16	1	08/19/21	08/19/21 22:36	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/19/21	08/19/21 22:36	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 22:36	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/19/21	08/19/21 22:36	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/19/21	08/19/21 22:36	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/19/21	08/19/21 22:36	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/19/21	08/19/21 22:36	WB
Carbon tetrachloride	**0.50**	J	ug/m³	1.30	0.33	1	08/19/21	08/19/21 22:36	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 22:36	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/19/21	08/19/21 22:36	WB
Chloroform	ND		ug/m³	0.97	0.24	1	08/19/21	08/19/21 22:36	WB
Chloromethane	**1.16**		ug/m³	0.41	0.10	1	08/19/21	08/19/21 22:36	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/19/21	08/19/21 22:36	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/19/21	08/19/21 22:36	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 22:36	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 22:36	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 22:36	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 22:36	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 22:36	WB
Dichlorodifluoromethane	**2.18**		ug/m³	0.99	0.99	1	08/19/21	08/19/21 22:36	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 22:36	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 22:36	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 22:36	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 22:36	WB
trans-1,2-Dichloroethene	**0.52**	J	ug/m³	0.79	0.20	1	08/19/21	08/19/21 22:36	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 22:36	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 22:36	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 22:36	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/19/21	08/19/21 22:36	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/19/21	08/19/21 22:36	WB
Ethylbenzene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 22:36	WB
4-Ethyltoluene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 22:36	WB
Freon 113	**0.54**	J	ug/m³	1.50	0.38	1	08/19/21	08/19/21 22:36	WB

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410-247-7600
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Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CLASS C214
21081829-010
1081917-10 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 114	ND		ug/m³	1.40	1.40	1	08/19/21	08/19/21 22:36	WB
n-Heptane	**1.07**		ug/m³	0.82	0.21	1	08/19/21	08/19/21 22:36	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/19/21	08/19/21 22:36	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/19/21	08/19/21 22:36	WB
2-Hexanone	ND		ug/m³	0.82	0.15	1	08/19/21	08/19/21 22:36	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/19/21	08/19/21 22:36	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/19/21	08/19/21 22:36	WB
Methylene chloride	ND		ug/m³	18.0	18.0	1	08/19/21	08/19/21 22:36	WB
Methyl ethyl ketone (2-Butanone)	**0.77**		ug/m³	0.59	0.34	1	08/19/21	08/19/21 22:36	WB
Methyl isobutyl ketone	ND		ug/m³	0.82	0.82	1	08/19/21	08/19/21 22:36	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/19/21	08/19/21 22:36	WB
Propene	ND		ug/m³	0.34	0.34	1	08/19/21	08/19/21 22:36	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/19/21	08/19/21 22:36	WB
Styrene	**0.17**	J	ug/m³	0.85	0.15	1	08/19/21	08/19/21 22:36	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 22:36	WB
Tetrachloroethene	ND		ug/m³	1.40	0.70	1	08/19/21	08/19/21 22:36	WB
Tetrahydrofuran	ND		ug/m³	0.59	0.15	1	08/19/21	08/19/21 22:36	WB
Toluene	**1.02**		ug/m³	0.75	0.35	1	08/19/21	08/19/21 22:36	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/19/21	08/19/21 22:36	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 22:36	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 22:36	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 22:36	WB
Trichlorofluoromethane (Freon 11)	**1.24**		ug/m³	1.10	0.28	1	08/19/21	08/19/21 22:36	WB
1,2,4-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 22:36	WB
1,3,5-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 22:36	WB
2,2,4-Trimethylpentane	ND		ug/m³	0.93	0.23	1	08/19/21	08/19/21 22:36	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/19/21	08/19/21 22:36	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 22:36	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/19/21	08/19/21 22:36	WB
o-Xylene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 22:36	WB
m- & p-Xylenes	ND		ug/m³	1.70	0.43	1	08/19/21	08/19/21 22:36	WB
Surrogate: 4-Bromofluorobenzene			*73-115*	*99 %*			*08/19/21*	*08/19/21 22:36*	

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Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CLASS B212
21081829-011
1081917-11 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**10.7**		ug/m³	2.40	2.40	1	08/19/21	08/19/21 23:11	WB
Benzene	ND		ug/m³	0.64	0.16	1	08/19/21	08/19/21 23:11	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/19/21	08/19/21 23:11	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 23:11	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/19/21	08/19/21 23:11	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/19/21	08/19/21 23:11	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/19/21	08/19/21 23:11	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/19/21	08/19/21 23:11	WB
Carbon tetrachloride	**0.44**	J	ug/m³	1.30	0.33	1	08/19/21	08/19/21 23:11	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 23:11	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/19/21	08/19/21 23:11	WB
Chloroform	ND		ug/m³	0.97	0.24	1	08/19/21	08/19/21 23:11	WB
Chloromethane	**1.09**		ug/m³	0.41	0.10	1	08/19/21	08/19/21 23:11	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/19/21	08/19/21 23:11	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/19/21	08/19/21 23:11	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 23:11	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 23:11	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 23:11	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 23:11	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 23:11	WB
Dichlorodifluoromethane	**2.18**		ug/m³	0.99	0.99	1	08/19/21	08/19/21 23:11	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 23:11	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 23:11	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 23:11	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 23:11	WB
trans-1,2-Dichloroethene	**0.28**	J	ug/m³	0.79	0.20	1	08/19/21	08/19/21 23:11	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 23:11	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 23:11	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 23:11	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/19/21	08/19/21 23:11	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/19/21	08/19/21 23:11	WB
Ethylbenzene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 23:11	WB
4-Ethyltoluene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 23:11	WB
Freon 113	**0.54**	J	ug/m³	1.50	0.38	1	08/19/21	08/19/21 23:11	WB

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Analytical Results

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CLASS B212
21081829-011
1081917-11 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 114	ND		ug/m³	1.40	1.40	1	08/19/21	08/19/21 23:11	WB
n-Heptane	**0.33**	J	ug/m³	0.82	0.21	1	08/19/21	08/19/21 23:11	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/19/21	08/19/21 23:11	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/19/21	08/19/21 23:11	WB
2-Hexanone	ND		ug/m³	0.82	0.15	1	08/19/21	08/19/21 23:11	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/19/21	08/19/21 23:11	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/19/21	08/19/21 23:11	WB
Methylene chloride	ND		ug/m³	18.0	18.0	1	08/19/21	08/19/21 23:11	WB
Methyl ethyl ketone (2-Butanone)	**0.94**		ug/m³	0.59	0.34	1	08/19/21	08/19/21 23:11	WB
Methyl isobutyl ketone	ND		ug/m³	0.82	0.82	1	08/19/21	08/19/21 23:11	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/19/21	08/19/21 23:11	WB
Propene	ND		ug/m³	0.34	0.34	1	08/19/21	08/19/21 23:11	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/19/21	08/19/21 23:11	WB
Styrene	ND		ug/m³	0.85	0.15	1	08/19/21	08/19/21 23:11	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 23:11	WB
Tetrachloroethene	ND		ug/m³	1.40	0.70	1	08/19/21	08/19/21 23:11	WB
Tetrahydrofuran	ND		ug/m³	0.59	0.15	1	08/19/21	08/19/21 23:11	WB
Toluene	**0.60**	J	ug/m³	0.75	0.35	1	08/19/21	08/19/21 23:11	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/19/21	08/19/21 23:11	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 23:11	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 23:11	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 23:11	WB
Trichlorofluoromethane (Freon 11)	**1.24**		ug/m³	1.10	0.28	1	08/19/21	08/19/21 23:11	WB
1,2,4-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 23:11	WB
1,3,5-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 23:11	WB
2,2,4-Trimethylpentane	ND		ug/m³	0.93	0.23	1	08/19/21	08/19/21 23:11	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/19/21	08/19/21 23:11	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 23:11	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/19/21	08/19/21 23:11	WB
o-Xylene	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 23:11	WB
m- & p-Xylenes	ND		ug/m³	1.70	0.43	1	08/19/21	08/19/21 23:11	WB
Surrogate: 4-Bromofluorobenzene			*73-115*	*99 %*			*08/19/21*	*08/19/21 23:11*	

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Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CLASS B333
21081829-012
1081917-12 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**14.8**		ug/m³	2.40	2.40	1	08/19/21	08/19/21 23:45	WB
Benzene	ND		ug/m³	0.64	0.16	1	08/19/21	08/19/21 23:45	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/19/21	08/19/21 23:45	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 23:45	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/19/21	08/19/21 23:45	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/19/21	08/19/21 23:45	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/19/21	08/19/21 23:45	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/19/21	08/19/21 23:45	WB
Carbon tetrachloride	**0.44**	J	ug/m³	1.30	0.33	1	08/19/21	08/19/21 23:45	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 23:45	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/19/21	08/19/21 23:45	WB
Chloroform	ND		ug/m³	0.97	0.24	1	08/19/21	08/19/21 23:45	WB
Chloromethane	**1.05**		ug/m³	0.41	0.10	1	08/19/21	08/19/21 23:45	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/19/21	08/19/21 23:45	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/19/21	08/19/21 23:45	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/19/21	08/19/21 23:45	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 23:45	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 23:45	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 23:45	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/19/21	08/19/21 23:45	WB
Dichlorodifluoromethane	**2.18**		ug/m³	0.99	0.99	1	08/19/21	08/19/21 23:45	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 23:45	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/19/21	08/19/21 23:45	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 23:45	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/19/21	08/19/21 23:45	WB
trans-1,2-Dichloroethene	**0.24**	J	ug/m³	0.79	0.20	1	08/19/21	08/19/21 23:45	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/19/21	08/19/21 23:45	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 23:45	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/19/21	08/19/21 23:45	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/19/21	08/19/21 23:45	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/19/21	08/19/21 23:45	WB
Ethylbenzene	**0.26**	J	ug/m³	0.87	0.22	1	08/19/21	08/19/21 23:45	WB
4-Ethyltoluene	**0.64**	J	ug/m³	0.98	0.25	1	08/19/21	08/19/21 23:45	WB
Freon 113	**0.46**	J	ug/m³	1.50	0.38	1	08/19/21	08/19/21 23:45	WB

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Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CLASS B333
21081829-012
1081917-12 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 114	ND		ug/m³	1.40	1.40	1	08/19/21	08/19/21 23:45	WB
n-Heptane	ND		ug/m³	0.82	0.21	1	08/19/21	08/19/21 23:45	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/19/21	08/19/21 23:45	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/19/21	08/19/21 23:45	WB
2-Hexanone	ND		ug/m³	0.82	0.15	1	08/19/21	08/19/21 23:45	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/19/21	08/19/21 23:45	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/19/21	08/19/21 23:45	WB
Methylene chloride	ND		ug/m³	18.0	18.0	1	08/19/21	08/19/21 23:45	WB
Methyl ethyl ketone (2-Butanone)	**1.09**		ug/m³	0.59	0.34	1	08/19/21	08/19/21 23:45	WB
Methyl isobutyl ketone	ND		ug/m³	0.82	0.82	1	08/19/21	08/19/21 23:45	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/19/21	08/19/21 23:45	WB
Propene	ND		ug/m³	0.34	0.34	1	08/19/21	08/19/21 23:45	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/19/21	08/19/21 23:45	WB
Styrene	ND		ug/m³	0.85	0.15	1	08/19/21	08/19/21 23:45	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/19/21	08/19/21 23:45	WB
Tetrachloroethene	ND		ug/m³	1.40	0.70	1	08/19/21	08/19/21 23:45	WB
Tetrahydrofuran	ND		ug/m³	0.59	0.15	1	08/19/21	08/19/21 23:45	WB
Toluene	**2.03**		ug/m³	0.75	0.35	1	08/19/21	08/19/21 23:45	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/19/21	08/19/21 23:45	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 23:45	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 23:45	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/19/21	08/19/21 23:45	WB
Trichlorofluoromethane (Freon 11)	**1.18**		ug/m³	1.10	0.28	1	08/19/21	08/19/21 23:45	WB
1,2,4-Trimethylbenzene	**0.79**	J	ug/m³	0.98	0.25	1	08/19/21	08/19/21 23:45	WB
1,3,5-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/19/21	08/19/21 23:45	WB
2,2,4-Trimethylpentane	ND		ug/m³	0.93	0.23	1	08/19/21	08/19/21 23:45	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/19/21	08/19/21 23:45	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/19/21	08/19/21 23:45	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/19/21	08/19/21 23:45	WB
o-Xylene	**0.39**	J	ug/m³	0.87	0.22	1	08/19/21	08/19/21 23:45	WB
m- & p-Xylenes	**0.78**	J	ug/m³	1.70	0.43	1	08/19/21	08/19/21 23:45	WB
Surrogate: 4-Bromofluorobenzene			*73-115*	*101 %*		*08/19/21*		*08/19/21 23:45*	

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410-247-7600
www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-HALL C309
21081829-013
1081917-13 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**15.5**		ug/m³	2.40	2.40	1	08/20/21	08/20/21 00:19	WB
Benzene	ND		ug/m³	0.64	0.16	1	08/20/21	08/20/21 00:19	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/20/21	08/20/21 00:19	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/20/21	08/20/21 00:19	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/20/21	08/20/21 00:19	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/20/21	08/20/21 00:19	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/20/21	08/20/21 00:19	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/20/21	08/20/21 00:19	WB
Carbon tetrachloride	**0.38**	J	ug/m³	1.30	0.33	1	08/20/21	08/20/21 00:19	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/20/21	08/20/21 00:19	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/20/21	08/20/21 00:19	WB
Chloroform	ND		ug/m³	0.97	0.24	1	08/20/21	08/20/21 00:19	WB
Chloromethane	**1.16**		ug/m³	0.41	0.10	1	08/20/21	08/20/21 00:19	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/20/21	08/20/21 00:19	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/20/21	08/20/21 00:19	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/20/21	08/20/21 00:19	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/20/21	08/20/21 00:19	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/20/21	08/20/21 00:19	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/20/21	08/20/21 00:19	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/20/21	08/20/21 00:19	WB
Dichlorodifluoromethane	**2.18**		ug/m³	0.99	0.99	1	08/20/21	08/20/21 00:19	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/20/21	08/20/21 00:19	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/20/21	08/20/21 00:19	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/20/21	08/20/21 00:19	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/20/21	08/20/21 00:19	WB
trans-1,2-Dichloroethene	**0.44**	J	ug/m³	0.79	0.20	1	08/20/21	08/20/21 00:19	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/20/21	08/20/21 00:19	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/20/21	08/20/21 00:19	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/20/21	08/20/21 00:19	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/20/21	08/20/21 00:19	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/20/21	08/20/21 00:19	WB
Ethylbenzene	ND		ug/m³	0.87	0.22	1	08/20/21	08/20/21 00:19	WB
4-Ethyltoluene	ND		ug/m³	0.98	0.25	1	08/20/21	08/20/21 00:19	WB
Freon 113	**0.46**	J	ug/m³	1.50	0.38	1	08/20/21	08/20/21 00:19	WB

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Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-HALL C309
21081829-013
1081917-13 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 114	ND		ug/m³	1.40	1.40	1	08/20/21	08/20/21 00:19	WB
n-Heptane	**0.29**	J	ug/m³	0.82	0.21	1	08/20/21	08/20/21 00:19	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/20/21	08/20/21 00:19	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/20/21	08/20/21 00:19	WB
2-Hexanone	ND		ug/m³	0.82	0.15	1	08/20/21	08/20/21 00:19	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/20/21	08/20/21 00:19	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/20/21	08/20/21 00:19	WB
Methylene chloride	ND		ug/m³	18.0	18.0	1	08/20/21	08/20/21 00:19	WB
Methyl ethyl ketone (2-Butanone)	**1.15**		ug/m³	0.59	0.34	1	08/20/21	08/20/21 00:19	WB
Methyl isobutyl ketone	ND		ug/m³	0.82	0.82	1	08/20/21	08/20/21 00:19	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/20/21	08/20/21 00:19	WB
Propene	ND		ug/m³	0.34	0.34	1	08/20/21	08/20/21 00:19	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/20/21	08/20/21 00:19	WB
Styrene	ND		ug/m³	0.85	0.15	1	08/20/21	08/20/21 00:19	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/20/21	08/20/21 00:19	WB
Tetrachloroethene	ND		ug/m³	1.40	0.70	1	08/20/21	08/20/21 00:19	WB
Tetrahydrofuran	ND		ug/m³	0.59	0.15	1	08/20/21	08/20/21 00:19	WB
Toluene	**0.72**	J	ug/m³	0.75	0.35	1	08/20/21	08/20/21 00:19	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/20/21	08/20/21 00:19	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/20/21	08/20/21 00:19	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/20/21	08/20/21 00:19	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/20/21	08/20/21 00:19	WB
Trichlorofluoromethane (Freon 11)	**1.24**		ug/m³	1.10	0.28	1	08/20/21	08/20/21 00:19	WB
1,2,4-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/20/21	08/20/21 00:19	WB
1,3,5-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/20/21	08/20/21 00:19	WB
2,2,4-Trimethylpentane	ND		ug/m³	0.93	0.23	1	08/20/21	08/20/21 00:19	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/20/21	08/20/21 00:19	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/20/21	08/20/21 00:19	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/20/21	08/20/21 00:19	WB
o-Xylene	ND		ug/m³	0.87	0.22	1	08/20/21	08/20/21 00:19	WB
m- & p-Xylenes	ND		ug/m³	1.70	0.43	1	08/20/21	08/20/21 00:19	WB
Surrogate: 4-Bromofluorobenzene		*73-115*		*99 %*		*08/20/21*		*08/20/21 00:19*	

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Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CLASS A328
21081829-014
1081917-14 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**14.6**		ug/m³	2.40	2.40	1	08/20/21	08/20/21 00:53	WB
Benzene	ND		ug/m³	0.64	0.16	1	08/20/21	08/20/21 00:53	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/20/21	08/20/21 00:53	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/20/21	08/20/21 00:53	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/20/21	08/20/21 00:53	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/20/21	08/20/21 00:53	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/20/21	08/20/21 00:53	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/20/21	08/20/21 00:53	WB
Carbon tetrachloride	**0.44**	J	ug/m³	1.30	0.33	1	08/20/21	08/20/21 00:53	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/20/21	08/20/21 00:53	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/20/21	08/20/21 00:53	WB
Chloroform	ND		ug/m³	0.97	0.24	1	08/20/21	08/20/21 00:53	WB
Chloromethane	**1.12**		ug/m³	0.41	0.10	1	08/20/21	08/20/21 00:53	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/20/21	08/20/21 00:53	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/20/21	08/20/21 00:53	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/20/21	08/20/21 00:53	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/20/21	08/20/21 00:53	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/20/21	08/20/21 00:53	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/20/21	08/20/21 00:53	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/20/21	08/20/21 00:53	WB
Dichlorodifluoromethane	**2.13**		ug/m³	0.99	0.99	1	08/20/21	08/20/21 00:53	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/20/21	08/20/21 00:53	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/20/21	08/20/21 00:53	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/20/21	08/20/21 00:53	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/20/21	08/20/21 00:53	WB
trans-1,2-Dichloroethene	**0.48**	J	ug/m³	0.79	0.20	1	08/20/21	08/20/21 00:53	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/20/21	08/20/21 00:53	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/20/21	08/20/21 00:53	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/20/21	08/20/21 00:53	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/20/21	08/20/21 00:53	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/20/21	08/20/21 00:53	WB
Ethylbenzene	ND		ug/m³	0.87	0.22	1	08/20/21	08/20/21 00:53	WB
4-Ethyltoluene	ND		ug/m³	0.98	0.25	1	08/20/21	08/20/21 00:53	WB
Freon 113	**0.54**	J	ug/m³	1.50	0.38	1	08/20/21	08/20/21 00:53	WB

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Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-CLASS A328
21081829-014
1081917-14 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 114	ND		ug/m³	1.40	1.40	1	08/20/21	08/20/21 00:53	WB
n-Heptane	ND		ug/m³	0.82	0.21	1	08/20/21	08/20/21 00:53	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/20/21	08/20/21 00:53	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/20/21	08/20/21 00:53	WB
2-Hexanone	**0.29**	J	ug/m³	0.82	0.15	1	08/20/21	08/20/21 00:53	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/20/21	08/20/21 00:53	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/20/21	08/20/21 00:53	WB
Methylene chloride	ND		ug/m³	18.0	18.0	1	08/20/21	08/20/21 00:53	WB
Methyl ethyl ketone (2-Butanone)	**1.95**		ug/m³	0.59	0.34	1	08/20/21	08/20/21 00:53	WB
Methyl isobutyl ketone	ND		ug/m³	0.82	0.82	1	08/20/21	08/20/21 00:53	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/20/21	08/20/21 00:53	WB
Propene	ND		ug/m³	0.34	0.34	1	08/20/21	08/20/21 00:53	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/20/21	08/20/21 00:53	WB
Styrene	ND		ug/m³	0.85	0.15	1	08/20/21	08/20/21 00:53	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/20/21	08/20/21 00:53	WB
Tetrachloroethene	**8.75**		ug/m³	1.40	0.70	1	08/20/21	08/20/21 00:53	WB
Tetrahydrofuran	ND		ug/m³	0.59	0.15	1	08/20/21	08/20/21 00:53	WB
Toluene	**0.45**	J	ug/m³	0.75	0.35	1	08/20/21	08/20/21 00:53	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/20/21	08/20/21 00:53	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/20/21	08/20/21 00:53	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/20/21	08/20/21 00:53	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/20/21	08/20/21 00:53	WB
Trichlorofluoromethane (Freon 11)	**1.24**		ug/m³	1.10	0.28	1	08/20/21	08/20/21 00:53	WB
1,2,4-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/20/21	08/20/21 00:53	WB
1,3,5-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/20/21	08/20/21 00:53	WB
2,2,4-Trimethylpentane	ND		ug/m³	0.93	0.23	1	08/20/21	08/20/21 00:53	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/20/21	08/20/21 00:53	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/20/21	08/20/21 00:53	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/20/21	08/20/21 00:53	WB
o-Xylene	ND		ug/m³	0.87	0.22	1	08/20/21	08/20/21 00:53	WB
m- & p-Xylenes	ND		ug/m³	1.70	0.43	1	08/20/21	08/20/21 00:53	WB
Surrogate: 4-Bromofluorobenzene			*73-115*	*99 %*			*08/20/21*	*08/20/21 00:53*	

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Analytical Results

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-OUTDOOR
21081829-015
1081917-15 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep									
Acetone	**8.22**		ug/m³	2.40	2.40	1	08/20/21	08/20/21 01:27	WB
Benzene	ND		ug/m³	0.64	0.16	1	08/20/21	08/20/21 01:27	WB
Benzyl chloride	ND		ug/m³	1.00	0.25	1	08/20/21	08/20/21 01:27	WB
Bromodichloromethane	ND		ug/m³	1.30	0.33	1	08/20/21	08/20/21 01:27	WB
Bromoform	ND		ug/m³	2.10	0.53	1	08/20/21	08/20/21 01:27	WB
Bromomethane	ND		ug/m³	0.78	0.20	1	08/20/21	08/20/21 01:27	WB
1,3-Butadiene	ND		ug/m³	0.44	0.44	1	08/20/21	08/20/21 01:27	WB
Carbon disulfide	ND		ug/m³	1.56	1.56	1	08/20/21	08/20/21 01:27	WB
Carbon tetrachloride	**0.44**	J	ug/m³	1.30	0.33	1	08/20/21	08/20/21 01:27	WB
Chlorobenzene	ND		ug/m³	0.92	0.23	1	08/20/21	08/20/21 01:27	WB
Chloroethane	ND		ug/m³	0.53	0.27	1	08/20/21	08/20/21 01:27	WB
Chloroform	ND		ug/m³	0.97	0.24	1	08/20/21	08/20/21 01:27	WB
Chloromethane	**1.12**		ug/m³	0.41	0.10	1	08/20/21	08/20/21 01:27	WB
3-Chloropropene	ND		ug/m³	0.63	0.16	1	08/20/21	08/20/21 01:27	WB
Cyclohexane	ND		ug/m³	0.69	0.17	1	08/20/21	08/20/21 01:27	WB
Dibromochloromethane	ND		ug/m³	1.30	0.33	1	08/20/21	08/20/21 01:27	WB
1,2-Dibromoethane (EDB)	ND		ug/m³	1.40	0.35	1	08/20/21	08/20/21 01:27	WB
1,2-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/20/21	08/20/21 01:27	WB
1,3-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/20/21	08/20/21 01:27	WB
1,4-Dichlorobenzene	ND		ug/m³	1.20	0.30	1	08/20/21	08/20/21 01:27	WB
Dichlorodifluoromethane	**2.23**		ug/m³	0.99	0.99	1	08/20/21	08/20/21 01:27	WB
1,1-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/20/21	08/20/21 01:27	WB
1,2-Dichloroethane	ND		ug/m³	0.81	0.20	1	08/20/21	08/20/21 01:27	WB
1,1-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/20/21	08/20/21 01:27	WB
cis-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/20/21	08/20/21 01:27	WB
trans-1,2-Dichloroethene	ND		ug/m³	0.79	0.20	1	08/20/21	08/20/21 01:27	WB
1,2-Dichloropropane	ND		ug/m³	0.92	0.23	1	08/20/21	08/20/21 01:27	WB
cis-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/20/21	08/20/21 01:27	WB
trans-1,3-Dichloropropene	ND		ug/m³	0.91	0.23	1	08/20/21	08/20/21 01:27	WB
1,4-Dioxane	ND		ug/m³	0.72	0.18	1	08/20/21	08/20/21 01:27	WB
Ethyl acetate	ND		ug/m³	3.60	3.60	1	08/20/21	08/20/21 01:27	WB
Ethylbenzene	ND		ug/m³	0.87	0.22	1	08/20/21	08/20/21 01:27	WB
4-Ethyltoluene	ND		ug/m³	0.98	0.25	1	08/20/21	08/20/21 01:27	WB

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

All analyses performed at Maryland Spectral Services included in the report are TNI certified except as indicated at the end of the report.

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

TC-OUTDOOR
21081829-015
1081917-15 (Vapor)
Sample Date: 08/17/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA TO-15 (GC/MS) Prepared by TO-15 Prep (continued)									
Freon 113	**0.54**	J	ug/m³	1.50	0.38	1	08/20/21	08/20/21 01:27	WB
Freon 114	ND		ug/m³	1.40	1.40	1	08/20/21	08/20/21 01:27	WB
n-Heptane	ND		ug/m³	0.82	0.21	1	08/20/21	08/20/21 01:27	WB
Hexachlorobutadiene	ND		ug/m³	2.10	2.10	1	08/20/21	08/20/21 01:27	WB
Hexane	ND		ug/m³	14.0	14.0	1	08/20/21	08/20/21 01:27	WB
2-Hexanone	ND		ug/m³	0.82	0.15	1	08/20/21	08/20/21 01:27	WB
Isopropylbenzene (Cumene)	ND		ug/m³	1.10	0.40	1	08/20/21	08/20/21 01:27	WB
Methyl tert-butyl ether (MTBE)	ND		ug/m³	0.72	0.21	1	08/20/21	08/20/21 01:27	WB
Methylene chloride	ND		ug/m³	18.0	18.0	1	08/20/21	08/20/21 01:27	WB
Methyl ethyl ketone (2-Butanone)	**0.91**		ug/m³	0.59	0.34	1	08/20/21	08/20/21 01:27	WB
Methyl isobutyl ketone	ND		ug/m³	0.82	0.82	1	08/20/21	08/20/21 01:27	WB
Naphthalene	ND		ug/m³	1.10	0.70	1	08/20/21	08/20/21 01:27	WB
Propene	ND		ug/m³	0.34	0.34	1	08/20/21	08/20/21 01:27	WB
n-Propylbenzene	ND		ug/m³	0.98	0.40	1	08/20/21	08/20/21 01:27	WB
Styrene	ND		ug/m³	0.85	0.15	1	08/20/21	08/20/21 01:27	WB
1,1,2,2-Tetrachloroethane	ND		ug/m³	1.40	0.35	1	08/20/21	08/20/21 01:27	WB
Tetrachloroethene	ND		ug/m³	1.40	0.70	1	08/20/21	08/20/21 01:27	WB
Tetrahydrofuran	ND		ug/m³	0.59	0.15	1	08/20/21	08/20/21 01:27	WB
Toluene	**0.38**	J	ug/m³	0.75	0.35	1	08/20/21	08/20/21 01:27	WB
1,2,4-Trichlorobenzene	ND		ug/m³	1.50	0.38	1	08/20/21	08/20/21 01:27	WB
1,1,1-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/20/21	08/20/21 01:27	WB
1,1,2-Trichloroethane	ND		ug/m³	1.10	0.28	1	08/20/21	08/20/21 01:27	WB
Trichloroethene	ND		ug/m³	1.10	0.28	1	08/20/21	08/20/21 01:27	WB
Trichlorofluoromethane (Freon 11)	**1.24**		ug/m³	1.10	0.28	1	08/20/21	08/20/21 01:27	WB
1,2,4-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/20/21	08/20/21 01:27	WB
1,3,5-Trimethylbenzene	ND		ug/m³	0.98	0.25	1	08/20/21	08/20/21 01:27	WB
2,2,4-Trimethylpentane	ND		ug/m³	0.93	0.23	1	08/20/21	08/20/21 01:27	WB
Vinyl acetate	ND		ug/m³	0.70	0.70	1	08/20/21	08/20/21 01:27	WB
Vinyl bromide	ND		ug/m³	0.87	0.22	1	08/20/21	08/20/21 01:27	WB
Vinyl chloride	ND		ug/m³	0.51	0.13	1	08/20/21	08/20/21 01:27	WB
o-Xylene	ND		ug/m³	0.87	0.22	1	08/20/21	08/20/21 01:27	WB
m- & p-Xylenes	ND		ug/m³	1.70	0.43	1	08/20/21	08/20/21 01:27	WB
Surrogate: 4-Bromofluorobenzene			*73-115*	*99 %*		*08/20/21*		*08/20/21 01:27*	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

All analyses performed at Maryland Spectral Services included in the report are TNI certified except as indicated at the end of the report.

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: T.C. Williams School

Project Number: 4920002
Project Manager: Amber Confer

Reported:
08/26/21 11:07

Notes and Definitions

L	Analyte is a possible laboratory contaminant
J	Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
%-Solids	Percent Solids is a supportive test and as such does not require accreditation

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rabecka Koons, Quality Assurance Officer

All analyses performed at Maryland Spectral Services included in the report are TNI certified except as indicated at the end of the report.

Chain of Custody Form for Subcontracted Analyses

Phase Separation Science, Inc
6630 Baltimore National Pike
Baltimore, MD 21228
Phone: (410) 747-8770
Fax: (410) 788-8723

W.O. No. : 21081829
Project Location : T. C. Williams School
Project Number : 4920002
Report To LOD : No

Samples Transferred To:
Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
Phone : 410-247-7600

For Questions or issues please contact: Amber Confer

Report Due On :08/26/21 05:00

Lab Sample ID	Field Sample ID	Date Sampled	Time Sampled	Matrix	Analyses Required	Method	Type of Container	Preservative 1081917
21081829-001	TC - Class E117	08/17/21	18:36	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON
21081829-002	TC - Hall E112	08/17/21	18:40	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON
21081829-003	TC - Gym	08/17/21	18:24	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON
21081829-004	TC - Auditorium	08/17/21	18:50	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON
21081829-005	TC - Office A110	08/17/21	19:08	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON
21081829-006	TC - Cafeteria	08/17/21	18:55	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON
21081829-007	TC - Class B105	08/17/21	19:03	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON
21081829-008	TC - Media Center	08/17/21	17:40	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON
21081829-009	TC - Class A205	08/17/21	18:09	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON
21081829-010	TC - Class C214	08/17/21	18:15	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON
21081829-011	TC - Class B212	08/17/21	18:21	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON
21081829-012	TC - Class B333	08/17/21	17:52	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON
21081829-013	TC - Hall C309	08/17/21	17:59	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON
21081829-014	TC - Class A328	08/17/21	18:02	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON
21081829-015	TC - Outdoor	08/17/21	19:14	Air	VOCs in Air by GC/MS (subbed)	TO-15	Air Canister	NON

-01 -02 -03 -04 -05 -06 -07 -08 -09 -10 -11 -12 -13 -14 -15

Data Deliverables Required: COA

Perform Q.C. on Sample : _____

Send Report Attn : reporting@phaseonline.com

Send InvoiceAttn : invoicing@phaseonline.com

Airbill No.: _____ Carrier : JTE

Condition Upon Receipt : _____

Comments : _____

Samples Relinquished By : _____ Date : 8/19/21 Time: 1055 Samples Received By : _____

Samples Relinquished By: _____ Date : 8/19/2 Time 1325 Samples Received By: Rachel Bonner 13:45 8/19/21

Samples Relinquished By: _____ Date: _____ Time: _____ Samples Received By: _____

Air Analysis by TO-15

Chain of Custody

Client Contact Information	Project Manager: Amber Confer	Carrier:	1 of 2 COCs
Company: Phase Separation	Phone:	Samplers Name(s)	Analysis/Matrix
	Site Contact:		
Project Name: TC Williams School	Analysis Turnaround Time		
Site:	Standard (Specify) 5 day		
PO #	Rush (Specify)		

Client Sample ID	Sample Date Start	Time Start (24 hr clock)	Sample Date Stop	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Incoming Canister Pressure ("Hg) (Lab)	Sample Regulator ID	Can ID	Can Size (L)	TO-15 FULL LIST	TO-15 ABBREVIATED LIST	Indoor / Ambient Air	Soil Gas / Subslab	Comments
21081829-001	8/17/21	0956	8/17/21	1836	28	0		03467	9136	1.4	✓		✓		10817 - 01
21081829-002		1003		1840	32	0	CY	10512	1536		✓		✓		- 02
21081829-003		1008		1824	29	0	BS	4693	599		✓		✓		- 03
21081829-004		1015		1850	30	2		3456	606		✓		✓		- 04
21081829-005		1022		1908	29	2	X	4446	00597		✓		✓		- 05
21081829-006		1023		1855	30	0	CI	4709	3680		✓		✓		- 06
21081829-007		1020		1903	30	0	SS	4722	10173		✓		✓		- 07
21081829-008		0926		1740	30	0	EP	14365	3771		✓		✓		- 08
21081829-009		0953		1809	30	2	EA	10286	9612		✓		✓		- 09
21081829-010		1003		1815	30	2	M	3605	10177		✓		✓		- 10
21081829-011		1039		1821	30	2	QL	10416	605		✓		✓		- 11
21081829-012		0945		1752	29	0	CC	4501	893		✓		✓		- 12
21081829-013		0951		1759	29	0	LL	4509	585		✓		✓		- 13
21081829-014	↓	0956	↓	1802	30	0	EC	4503	10190	↓	✓		✓		- 14

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time: 8/19/21	13:25
Samples Relinquished by:	Date/Time:	Received by:	Date/Time:	
Relinquished by:	Date/Time:	Received by:	Date/Time:	

TO-15_COC.xls

Air Analysis by TO-15

Chain of Custody

Client Contact Information	Project Manager: Amber Confer	Carrier:	2 of 2 COCs
Company: Phase Separation	Phone:	Samplers Name(s)	
	Site Contact:		
Project Name: TC Williams School	Analysis Turnaround Time		
Site:	Standard (Specify) 5 day		
PO #	Rush (Specify)		

Client Sample ID	Sample Date Start	Time Start (24 hr clock)	Sample Date Stop	Time Stop (24 hr clock)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Incoming Canister Pressure ("Hg) (Lab)	Sample Regulator ID	Can ID	Can Size (L)	Analysis / Matrix: TO-15 FULL LIST	TO-15 ABREVIATED LIST	Indoor / Ambient Air	Soil Gas / Subslab	Comments
21081829-015	8/7/21	1015	8/7/21	1914	30	0		4689	10174	1.4	✓		✓		-15

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:	Date/Time: 8/19/21 13:25
Samples Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

TO-15_COC.xls

6630 Baltimore National Pike
Baltimore, MD 21228
410-747-8770
800-932-9047
www.phaseonline.com

Project Name: ACPS IAQ Testing

PSS Project No.: 21081829

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

Incoming pressures not taken at PSS; samples subbed out. Incoming pressures will be taken at subcontracted lab.
Soil gas/indoor air not indicated on COC; samples are indoor air.

21081829: Analyses associated with analyst code 4010 were performed by
Maryland Spectral Services, Inc., 1500 Caton Center Drive, Suite G, Baltimore, MD 21227 - VA 460156

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

PHASE SEPARATION SCIENCE

6630 Baltimore National Pike
Baltimore, MD 21228
410-747-8770
800-932-9047
www.phaseonline.com

Lab Chronology

Project Name: ACPS IAQ Testing
PSS Project No.: 21081829

Method	Client Sample ID	Analysis Type	PSS Sample ID	Mtx	Prep Batch	Analytical Batch	Prepared	Analyzed
EPA TO-15	TC - Class E117	Initial	21081829-001	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44
	TC - Hall E112	Initial	21081829-002	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44
	TC - Gym	Initial	21081829-003	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44
	TC - Auditorium	Initial	21081829-004	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44
	TC - Office A110	Initial	21081829-005	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44
	TC - Cafeteria	Initial	21081829-006	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44
	TC - Class B105	Initial	21081829-007	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44
	TC - Media Center	Initial	21081829-008	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44
	TC - Class A205	Initial	21081829-009	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44
	TC - Class C214	Initial	21081829-010	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44
	TC - Class B212	Initial	21081829-011	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44
	TC - Class B333	Initial	21081829-012	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44
	TC - Hall C309	Initial	21081829-013	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44
	TC - Class A328	Initial	21081829-014	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44
	TC - Outdoor	Initial	21081829-015	A	187093	187093	08/26/2021 15:44	08/26/2021 15:44

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM TO-15

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1)
*CLIENT: Total Environmental Concepts, Inc. *OFFICE LOC.: Lorton
*PROJECT MGR: Karl Ford
EMAIL: kford@teci.pro *PHONE NO: (703) 567-4346
*PROJECT NAME: ACPS IAQ testing PROJECT NO.: 4920002
SITE LOCATION: T.C. Williams School P.O. NO.: ODC 4920002-001
SAMPLER(S): Karl Ford

PSS Work Order #: 2108189

PAGE 1 OF 2

(2)

LAB #	*SAMPLE IDENTIFICATION	*DATE START	*Time Start (24hr clock)	*DATE STOP	*Time Stop (24hr clock)	* (3) Can ID *	Sample Reg. ID *	Canister Pressure * in field ("Hg) Start	Canister Pressure * in field ("Hg) Stop	Incoming Canister Pressure ("Hg) Lab	Soil Gas / Subslab *	Indoor/Ambient Air *	TO-15 Full List	Special List	REMARKS
1	TC - Class E117	8-17-21	0956	8-17-21	1836	9136	03467	28	0				✓		
2	TC - Hall E112	8-17-21	1003	8-17-21	1840	1563	10512	32	2				✓		
3	TC - Gym	8-17-21	1008	8-17-21	1824	599	04693	29	0				✓		
4	TC - Auditorium	8-17-21	1015	8-17-21	1850	606	03456	30	2				✓		
5	TC -Office A110	8-17-21	1022	8-17-21	1908	00597	04446	29	2				✓		
6	TC - Cafeteria	8-17-21	1023	8-17-21	1855	3680	04708	30	0				✓		
7	TC - Class B105	8-17-21	1020	8-17-21	1903	10173	04722	30	0				✓		
8	TC - Media Center	8-17-21	0926	8-17-21	1740	3771	14365	30	0				✓		
9	TC - Class A205	8-17-21	0953	8-17-21	1809	9612	10286	30	2				✓		
10	TC - Class C214	8-17-21	1003	8-17-21	1815	10177	03605	30	2				✓		

(5)

	Date	Time	Received By:
Relinquished By: (1)	8/18/21	1500	
Relinquished By: (2)			
Relinquished By: (3)			
Relinquished By: (4)			

(4) *Requested TAT (One TAT per COC)
☑ 5-Day ☐ 3-Day ☐ 2-Day
☐ Next Day ☐ Emergency ☐ Other

Shipping Carrier: Client

Data Deliverables Required:

Special Instructions:

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM TO-15

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1)
*CLIENT: Total Environmental Concepts, Inc. *OFFICE LOC.: Lorton
*PROJECT MGR: Karl Ford
EMAIL: kford@teci.pro *PHONE NO: (703) 567-4346
*PROJECT NAME: ACPS IAQ testing PROJECT NO.: 4920002
SITE LOCATION: T.C. Williams School P.O. NO.: ODC 4920002-001
SAMPLER(S): Karl Ford

PSS Work Order #: 21081829
PAGE 2 OF 2

(2)

LAB #	*SAMPLE IDENTIFICATION	*DATE START	*Time Start (24hr clock)	*DATE STOP	*Time Stop (24hr clock)	*(3) Can ID	Sample Reg. ID *	Canister Pressure * in field ("Hg) Start	Canister Pressure * in field ("Hg) Stop	Incoming Canister Pressure ("Hg) Lab	Soil Gas / Subslab *	Indoor/Ambient Air *	TO-15 Full List	Special List	REMARKS
11	TC - Class B212	8-17-21	1039	8-17-21	1821	605	10416	30	2		☐	☐	☑	☐	
12	TC - Class B333	8-17-21	0945	8-17-21	1752	893	04501	29	0		☐	☐	☑	☐	
13	TC - Hall C309	8-17-21	0951	8-17-21	1759	00585	04509	29	0		☐	☐	☑	☐	
14	TC - Class A328	8-17-21	0956	8-17-21	1802	10190	04503	30	0		☐	☐	☑	☐	
15	TC - Outdoor	8-17-21	1015	8-17-21	1914	10174	04687	30	0		☐	☐	☑	☐	
											☐	☐	☐	☐	
											☐	☐	☐	☐	
											☐	☐	☐	☐	
											☐	☐	☐	☐	
											☐	☐	☐	☐	

(5)

Relinquished By: (1)	Date	Time	Received By:
Donna Johnson	8/18/21	1500	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4) *Requested TAT (One TAT per COC)
☑ 5-Day ☐ 3-Day ☐ 2-Day
☐ Next Day ☐ Emergency ☐ Other

Shipping Carrier: CMA

Data Deliverables Required:

Special Instructions:

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

PHASE SEPARATION SCIENCE

6630 Baltimore National Pike
Baltimore, MD 21228
410-747-8770
800-932-9047
www.phaseonline.com

Sample Receipt Checklist

Project Name: ACPS IAQ Testing
PSS Project No.: 21081829

Client Name Total Environmental Concepts - Lortc
Disposal Date 09/22/2021

Received By Thomas Wingate
Date Received 08/18/2021 03:00:00 PM
Delivered By Client
Tracking No Not Applicable
Logged In By Thomas Wingate

Shipping Container(s)
No. of Coolers 0

Ice N/A
Custody Seal(s) Intact? N/A
Temp (deg C)
Seal(s) Signed / Dated? N/A
Temp Blank Present No

Documentation
Sampler Name Karl Ford
COC agrees with sample labels? Yes
MD DW Cert. No. N/A
Chain of Custody Yes

Sample Container
Custody Seal(s) Intact? Not Applicable
Appropriate for Specified Analysis? Yes
Seal(s) Signed / Dated Not Applicable
Intact? Yes
Labeled and Labels Legible? Yes

Holding Time
Total No. of Samples Received 15
All Samples Received Within Holding Time(s)? Yes
Total No. of Containers Received 15

Preservation

Total Metals	(pH<2)	N/A
Dissolved Metals, filtered within 15 minutes of collection	(pH<2)	N/A
Orthophosphorus, filtered within 15 minutes of collection		N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, DOC (field filtered), COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A
524 VOC (Rcvd with trip blanks)	(pH<2)	N/A

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Sample Receipt Checklist

Project Name: ACPS IAQ Testing
PSS Project No.: 21081829

Client Name	Total Environmental Concepts - Lortc	**Received By**	Thomas Wingate
Disposal Date	09/22/2021	**Date Received**	08/18/2021 03:00:00 PM
		Delivered By	Client
		Tracking No	Not Applicable
		Logged In By	Thomas Wingate

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Incoming pressures not taken at PSS; samples subbed out. Incoming pressures will be taken at subcontracted lab.
Soil gas/indoor air not indicated on COC; samples are indoor air.

Samples Inspected/Checklist Completed By: Thomas Wingate Date: 08/18/2021

PM Review and Approval: Thomas Wingate Date: 08/18/2021

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM TO-15

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1)

*CLIENT: Total Environmental Concepts, Inc. *OFFICE LOC.: Lorton

*PROJECT MGR: Karl Ford

EMAIL: kford@teci.pro *PHONE NO: (703) 567-4346

*PROJECT NAME: ACPS IAQ testing PROJECT NO.: 4920002

SITE LOCATION: T.C. Williams School P.O. NO.: ODC 4920002-001

SAMPLER(S): Karl Ford

PSS Work Order #:

PAGE 1 OF 2

(2)

LAB #	*SAMPLE IDENTIFICATION	*DATE START	*Time Start (24hr clock)	*DATE STOP	*Time Stop (24hr clock)	* (3) Can ID *	Sample Reg. ID *	Canister Pressure * in field ("Hg) Start	Canister Pressure * in field ("Hg) Stop	Incoming Canister Pressure ("Hg) Lab	Soil Gas / Subslab *	Indoor/Ambient Air *	TO-15 Full List	Special List	REMARKS
	TC - Class E117	8-17-21	0956	8-17-21	1836	9136	03467	28	0		☐	☐	✔	☐	
	TC - Hall E112	8-17-21	1003	8-17-21	1840	1563	10512	32	2		☐	☐	✔	☐	
	TC - Gym	8-17-21	1008	8-17-21	1824	599	04693	29	0		☐	☐	✔	☐	
	TC - Auditorium	8-17-21	1015	8-17-21	1850	606	03456	30	2		☐	☐	✔	☐	
	TC -Office A110	8-17-21	1022	8-17-21	1908	00597	04446	29	2		☐	☐	✔	☐	
	TC - Cafeteria	8-17-21	1023	8-17-21	1855	3680	04708	30	0		☐	☐	✔	☐	
	TC - Class B105	8-17-21	1020	8-17-21	1903	10173	04722	30	0		☐	☐	✔	☐	
	TC - Media Center	8-17-21	0926	8-17-21	1740	3771	14365	30	0		☐	☐	✔	☐	
	TC - Class A205	8-17-21	0953	8-17-21	1809	9612	10286	30	2		☐	☐	✔	☐	
	TC - Class C214	8-17-21	1003	8-17-21	1815	10177	03605	30	2		☐	☐	✔	☐	

(5)

Relinquished By:	Date	Time	Received By:
(1)			
(2)			
(3)			
(4)			

(4) *Requested TAT (One TAT per COC)

☑ 5-Day ☐ 3-Day ☐ 2-Day
☐ Next Day ☐ Emergency ☐ Other

Shipping Carrier:

Data Deliverables Required:

Special Instructions:

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM TO-15

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1)

*CLIENT: Total Environmental Concepts, Inc. *OFFICE LOC.: Lorton

*PROJECT MGR: Karl Ford

EMAIL: kford@teci.pro *PHONE NO: (703) 567-4346

*PROJECT NAME: ACPS IAQ testing PROJECT NO.: 4920002

SITE LOCATION: T.C. Williams School P.O. NO.: ODC 4920002-001

SAMPLER(S): Karl Ford

PSS Work Order #:

PAGE 1 OF 2

(2)

LAB #	*SAMPLE IDENTIFICATION	*DATE START	*Time Start (24hr clock)	*DATE STOP	*Time Stop (24hr clock)	* (3) Can ID *	Sample Reg. ID *	Canister Pressure * in field ("Hg) Start	Canister Pressure * in field ("Hg) Stop	Incoming Canister Pressure ("Hg) Lab	Soil Gas / Subslab *	Indoor/Ambient Air *	TO-15 Full List	Special List	REMARKS
	TC - Class E117	8-17-21	0956	8-17-21	1836	9136	03467	28	0		☐	☐	✔	☐	
	TC - Hall E112	8-17-21	1003	8-17-21	1840	1563	10512	32	2		☐	☐	✔	☐	
	TC - Gym	8-17-21	1008	8-17-21	1824	599	04693	29	0		☐	☐	✔	☐	
	TC - Auditorium	8-17-21	1015	8-17-21	1850	606	03456	30	2		☐	☐	✔	☐	
	TC -Office A110	8-17-21	1022	8-17-21	1908	00597	04446	29	2		☐	☐	✔	☐	
	TC - Cafeteria	8-17-21	1023	8-17-21	1855	3680	04708	30	0		☐	☐	✔	☐	
	TC - Class B105	8-17-21	1020	8-17-21	1903	10173	04722	30	0		☐	☐	✔	☐	
	TC - Media Center	8-17-21	0926	8-17-21	1740	3771	14365	30	0		☐	☐	✔	☐	
	TC - Class A205	8-17-21	0953	8-17-21	1809	9612	10286	30	2		☐	☐	✔	☐	
	TC - Class C214	8-17-21	1003	8-17-21	1815	10177	03605	30	2		☐	☐	✔	☐	

(5)

Relinquished By: (1)	Date	Time	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4) *Requested TAT (One TAT per COC)

☑ 5-Day ☐ 3-Day ☐ 2-Day
☐ Next Day ☐ Emergency ☐ Other

Shipping Carrier:

Data Deliverables Required:

Special Instructions:

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Appendix D: Formaldehyde Analytical Results

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Certificate of Analysis

Project Name: ACPS IAQ Testing
PSS Project No.: 21082532

September 3, 2021

Karl Ford
Total Environmental Concepts - Lorton
8382 Terminal Road, Suite B
Lorton, VA 22079

Reference: PSS Project No: **21082532**
Project Name: ACPS IAQ Testing
Project Location: T.C Williams School
Project ID.: 4920002

Dear Karl Ford:

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Project number(s) **21082532**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on September 29, 2021, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal
Laboratory Manager

PHASE SEPARATION SCIENCE

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Baltimore, MD 21228
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Explanation of Qualifiers

Project Name: ACPS IAQ Testing
PSS Project No.: 21082532

Project ID: 4920002

The following samples were received under chain of custody by Phase Separation Science (PSS) on 08/25/2021 at 05:35 pm

PSS Sample ID	Sample ID	Matrix	Date/Time Collected
21082532-001	TC-Class E117	AIR	08/17/21 00:00
21082532-002	TC-Hall E112	AIR	08/17/21 00:00
21082532-003	TC-Gym	AIR	08/17/21 00:00
21082532-004	TC-Auditorium	AIR	08/17/21 00:00
21082532-005	TC-Office A110	AIR	08/17/21 00:00
21082532-006	TC-Cafeteria	AIR	08/17/21 00:00
21082532-007	TC-Class B105	AIR	08/17/21 00:00
21082532-008	TC-Hall E136	AIR	08/17/21 00:00
21082532-009	TC-Media Center	AIR	08/17/21 00:00
21082532-010	TC-Class A205	AIR	08/17/21 00:00
21082532-011	TC-Class C214	AIR	08/17/21 00:00
21082532-012	TC-Class B212	AIR	08/17/21 00:00
21082532-013	TC-Class B333	AIR	08/17/21 00:00
21082532-014	TC-Hall C309	AIR	08/17/21 00:00
21082532-015	TC-Class A328	AIR	08/17/21 00:00

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

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Explanation of Qualifiers

Project Name: ACPS IAQ Testing

PSS Project No.: 21082532

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

SGS GALSON

Ms. Amber Confer
Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

September 02, 2021

Account# 15354

Login# L545213

Dear Amber Confer:

Enclosed are the analytical results for the samples received by our laboratory on August 27, 2021. All samples on the chain of custody were received in good condition unless otherwise noted. Any additional observations will be noted on the chain of custody.

Please contact client services at (888) 432-5227 if you would like any additional information regarding this report. Thank you for using SGS Galson.

Sincerely,

SGS Galson

Lisa Swab
Laboratory Director

Enclosure(s)

Terms and Conditions & General Disclaimers

- This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.
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Analytical Disclaimers

- Unless otherwise noted within the report, all quality control results associated with the samples were within established control limits or did not impact reported results.
- Note: The findings recorded within this report were drawn from analysis of the sample(s) provided to the laboratory by the Client (or a third party acting at the Client's direction). The laboratory does not have control over the sampling process, including but not limited to the use of field equipment and collection media, as well as the sampling duration, collection volume or any other collection parameter used by the Client. The findings herein constitute no warranty of the sample's representativeness of any sampled environment, and strictly relate to the samples as they were presented to the laboratory. For recommended sampling collection parameters, please refer to the Sampling and Analysis Guide at www.sgsgalson.com.
- Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceding the final result column may have been rounded and therefore, if carried through the calculations, may not yield an identical final result to the one reported.
- The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).
- Unless otherwise noted within the report, results have not been blank corrected for any field blank or method blank data.

Accreditations SGS Galson holds a variety of accreditations and recognitions. Our quality management system conforms with the requirements of ISO/IEC 17025. Where applicable, samples may also be analyzed in accordance with the requirements of ELAP, NELAC, or LELAP under one of the state accrediting bodies listed below. Current Scopes of Accreditation can be viewed at http://www.sgsgalson.com in the accreditations section of the "About" page. To determine if the analyte tested falls under our scope of accreditation, please visit our website or call Client Services at (888) 432-5227.

National/International	Accreditation/Recognition	Lab ID#	Program/Sector
AIHA-LAP, LLC - IHLAP, ELLAP, EMLAP	ISO/IEC 17025 and USEPA NLLAP	Lab ID 100324	Industrial Hygiene, Environmental Lead, Environmental Microbiology

State	Accreditation/Recognition	Lab ID#	Program/Sector
New York (NYSDOH)	ELAP and NELAC (TNI)	Lab ID: 11626	Air Analysis, Solid and Hazardous Waste
New Jersey (NJDEP)	NELAC (TNI)	Lab ID: NY024	Air Analysis
Louisiana (LDEQ)	LELAP	Lab ID: 04083	Air Analysis, Solid Chemical Materials
Texas	Texas Dept. of Licensing and Regulation	Lab ID: 1042	Mold Analysis Laboratory license

Legend

< - Less than	mg - Milligrams	MDL - Method Detection Limit	ppb - Parts per Billion
> - Greater than	ug - Micrograms	NA - Not Applicable	ppm - Parts per Million
l - Liters	m3 - Cubic Meters	NS - Not Specified	ppbv - ppb Volume
LOQ - Limit of Quantitation	kg - Kilograms	ND - Not Detected	ppmv - ppm Volume
ft2 - Square Feet	cm2 - Square Centimeters	in2 - Square Inches	ng - Nanograms

SGS GALSON

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East Syracuse, NY 13057
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FAX: (315) 437-0571
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LABORATORY ANALYSIS REPORT

Client : Phase Separation Science, Inc.
Site : T.C. WILLIAMS SCHOOL
Project No. : ACPS IAQ TESTING-4920002
Date Sampled : 17-AUG-21
Date Received : 27-AUG-21

Account No.: 15354
Login No. : L545213
Date Analyzed : 30-AUG-21
Report ID : 1262667

Formaldehyde

Sample ID	Lab ID	Time minutes	Total ug	Conc mg/m3	ppm
TC-CLASS E117	L545213-1	304	<0.4	<0.01	<0.009
TC-HALL E112	L545213-2	312	<0.4	<0.01	<0.009
TC-GYM	L545213-3	289	<0.4	<0.01	<0.009
TC-AUDITORIUM	L545213-4	319	<0.4	<0.01	<0.009
TC-OFFICE A110	L545213-5	313	<0.4	<0.01	<0.009
TC-CAFETERIA	L545213-6	307	<0.4	<0.01	<0.009
TC-CLASS B105	L545213-7	319	<0.4	<0.01	<0.009
TC-HALL E136	L545213-8	305	<0.4	<0.01	<0.009
TC-MEDIA CENTER	L545213-9	263	<0.4	<0.01	<0.01
TC-CLASS A205	L545213-10	249	<0.4	<0.01	<0.01
TC-CLASS C214	L545213-11	245	<0.4	<0.01	<0.01
TC-CLASS B212	L545213-12	256	<0.4	<0.01	<0.01
TC-CLASS B333	L545213-13	218	<0.4	<0.02	<0.01
TC-HALL C309	L545213-14	214	<0.4	<0.02	<0.01
TC-CLASS A328	L545213-15	220	<0.4	<0.02	<0.01

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of Quantitation: 0.4 ug
Analytical Method : mod. OSHA 1007; HPLC/UV
Collection Media : Assay 581

Submitted by: JLL
Date : 02-SEP-21
Supervisor : MWJ

Approved by: MLN

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

Client Name : Phase Separation Science, Inc.
Site : T.C. WILLIAMS SCHOOL
Project No. : ACPS IAQ TESTING-4920002

Date Sampled : 17-AUG-21 Account No.: 15354
Date Received: 27-AUG-21 Login No. : L545213
Date Analyzed: 30-AUG-21

L545213 (Report ID: 1262667):
Total ug corrected for a desorption efficiency of 96%.
FORMALDEHYDE results have been corrected for the average background found on the media:
0.1178 ug for lot #4B21 (samples 1-15).
SOPs: LC-SOP-4(23)

L545213 (Report ID: 1262667):
Accuracy and mean recovery data presented below is based on a 95% confidence interval (k=2). The estimated accuracy applies to the media, technology, and SOP referenced in this report and does not account for the uncertainty associated with the sampling process. The accuracy is based solely on spike recovery data from internal quality control samples. Where N/A appears below, insufficient data is available to provide statistical accuracy and mean recovery values for the associated analyte.

Parameter	Accuracy	Mean Recovery
Formaldehyde	+/-12.1%	95.3%

L545213 21082532

SGS GALSON

1Z2313E40166972748
Date: 08/27/21
Shipper: UPS
Initials: MAK
Prep: UNKNOWN

☐ New Client? Client Account No.*:

Report To*: Phase Separation Science
6630 Baltimore National Pike
Baltimore, MD 21228

Phone No.*: 410-747-8770
Cell No.:
Email Results to: Amber Confer
Email address: reporting@phaseonline.com

Invoice To*: Phase Separation Science

23-24

Phone No.: 410-747-8770
Email: invoicing@phaseonline.com
P.O. No.: ODC 4920002-001
Credit Card: ☐ Card on File ☐ Call for Credit Card Info.

☑ Samples submitted using the FreePumpLoan™ Program ☐ Samples submitted using the FreeSamplingBadges™ Program

Need Results By:	(surcharge)
☑ Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name: T.C. Williams School Project: ACPS IAQ testing - 4920002 Sampled by: Karl Ford

Comments:
Dosimeter cartrige # noted in the (Hexavelent Chromium Process) colum

List description of industry or Process/interferences present in sampling area:
Public grade school building

State samples were collected in (e.g., NY)
VA

Please indicate which OEL this data will be used for:
☑ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA ☐ MSHA ☐ Other (specify):

Sample Identification* (Maxmium of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units*: L, ml,min,in2,cm2,ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
TC - Class E117	08/17/21	Assay N581 Aldehyde Badge	304	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4334
TC - Hall E112	08/17/21	Assay N581 Aldehyde Badge	312	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4197
TC - Gym	08/17/21	Assay N581 Aldehyde Badge	289	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4198
TC - Auditorium	08/17/21	Assay N581 Aldehyde Badge	319	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4240
TC -Office A110	08/17/21	Assay N581 Aldehyde Badge	313	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4560
TC - Cafeteria	08/17/21	Assay N581 Aldehyde Badge	307	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4469
TC - Class B105	08/17/21	Assay N581 Aldehyde Badge	319	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4171
TC - Hall E136	08/17/21	Assay N581 Aldehyde Badge	305	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4846
TC - Media Center	08/17/21	Assay N581 Aldehyde Badge	263	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD5324
TC - Class A205	08/17/21	Assay N581 Aldehyde Badge	249	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4129
TC - Class C214	08/17/21	Assay N581 Aldehyde Badge	245	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4750

^Galson Laboratories will subsitute our routine/preferred method if it does not match the method listed on the COC unless this box is checked: ☑ Use method(s) listed on COC

For metals analysis: if requesting an analyte with the option of a lower LOQ, please indicate if the lower LOQ is required (only available for certain analytes - see SAG):

For crystalline silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite)*:

Chain of Custody	Print Name/Signature	Date	Time		Print Name/Signature	Date	Time
Relinquished by:	Client	8/25/21	1735	Received by:			
Relinquished by:				Received by:	Michelle Krause	8/27/21	11:17

Samples received after 3pm will be considered as next day's business
* Required fields, failure to complete these fields may result in a delay in your samples being processed.

Page 1 of 2

21082532

SGS GALSON

6601 Kirkville Rd
East Syracuse, NY 13057
Tel: (315) 432-5227
888-432-LABS (5227)
www.sgsgalson.com

☐ New Client?

Client Account No.*:

Report To*: Phase Separation Science
6630 Baltimore National Pike
~~Baltimore, MD 21228~~

Phone No.*: 410-747-8770
Cell No.:
Email Results to: Amber Confer
Email address: reporting@phaseonline.com

Invoice To*: Phase Separation Science

Phone No.: 410-747-8770
Email: invoicing@phaseonline.com
P.O. No.: ODC 4920002-001
Credit Card: ☐ Card on File ☐ Call for Credit Card Info.

☑ Samples submitted using the FreePumpLoan™ Program ☐ Samples submitted using the FreeSamplingBadges™ Program

Need Results By:	(surcharge)
☑ Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name: T.C. Williams School Project: ACPS IAQ testing - 4920002 Sampled by: Karl Ford

Comments:
Dosimeter cartrige # noted in the (Hexavelent Chromium Process) colum

List description of industry or Process/interferences present in sampling area:
Public grade school building

State samples were collected in (e.g., NY): VA

Please indicate which OEL this data will be used for: ☑ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA ☐ MSHA ☐ Other (specify):

Sample Identification* (Maxmium of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units*: L, ml,min,in2,cm2,ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
TC - Class B212	08/17/21	Assay N581 Aldehyde Badge	256	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4055
TC - Class B333	08/17/21	Assay N581 Aldehyde Badge	218	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4290
TC - Hall C309	08/17/21	Assay N581 Aldehyde Badge	214	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD5430
TC - Class A328	08/17/21	Assay N581 Aldehyde Badge	220	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4546
		Assay N581 Aldehyde Badge			Formaldehyde	mod. OSHA 1007: TPLC/UV	
		Assay N581 Aldehyde Badge			Formaldehyde	mod. OSHA 1007: TPLC/UV	
		Assay N581 Aldehyde Badge			Formaldehyde	mod. OSHA 1007: TPLC/UV	
		Assay N581 Aldehyde Badge			Formaldehyde	mod. OSHA 1007: TPLC/UV	
		Assay N581 Aldehyde Badge			Formaldehyde	mod. OSHA 1007: TPLC/UV	
		Assay N581 Aldehyde Badge			Formaldehyde	mod. OSHA 1007: TPLC/UV	
		Assay N581 Aldehyde Badge			Formaldehyde	mod. OSHA 1007: TPLC/UV	

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For crystalline silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite)*:

Chain of Custody	Print Name/Signature	Date	Time		Print Name/Signature	Date	Time
Relinquished by:	Client	8/25/21	1735	Received by:	Amber Confer		
Relinquished by:	Amber Confer			Received by:	Michelle Krause	8/27/21	1117

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Page 2 of 2

 Version 1.000

Chain of Custody Form for Subcontracted Analyses

Phase Separation Science, Inc
6630 Baltimore National Pike
Baltimore, MD 21228
Phone: (410) 747-8770
Fax: (410) 788-8723

For Questions or issues please contact: Amber Confer

W.O. No. : 21082532 on 8/26/21
Project Location : ~~Samuel Tucker Elementary~~ TC Williams School
Project Number : 4920002
Report To LOD : No

Report Due On :09/03/21 05:00

Samples Transferred To:
SGS North America - NY
6601 Kirkville Road
East Syracuse, NY 13057

Old SGS Galson Labs. bsc
Phone : 315-432-5227

23-24

Lab Sample ID	Field Sample ID	Date Sampled	Time Sampled	Matrix	Analyses Required	Method	Type of Container	Preservative
21082532-001	TC-Class E117	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON
21082532-002	TC-Hall E112	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON
21082532-003	TC-Gym	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON
21082532-004	TC-Auditorium	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON
21082532-005	TC-Office A110	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON
21082532-006	TC-Cafeteria	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON
21082532-007	TC-Class B105	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON
21082532-008	TC-Hall E136	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON
21082532-009	TC-Media Center	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON
21082532-010	TC-Class A205	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON
21082532-011	TC-Class C214	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON
21082532-012	TC-Class B212	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON
21082532-013	TC-Class B333	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON
21082532-014	TC-Hall 309	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON
21082532-015	TC-Class A328	08/17/21	00:00	Air	Formaldehyde (mod. OSHA 1007; HPLC/UV)	VARIOUS	NONSC	NON

Data Deliverables Required: COA

Perform Q.C. on Sample : _____

Send Report Attn : reporting@phaseonline.com

Send InvoiceAttn : invoicing@phaseonline.com

Airbill No.: _____ Carrier : UPS

Condition Upon Receipt : _____

Comments :

Samples Relinquished By : [signature] Date : _____ Time: _____ Samples Received By : _____

Samples Relinquished By: _____ Date : _____ Time : _____ Samples Received By: Michelle Krause Michelle Krause

Samples Relinquished By: _____ Date: _____ Time: _____ Samples Received By: _____

8/27/21

6630 Baltimore National Pike
Baltimore, MD 21228
410-747-8770
800-932-9047
www.phaseonline.com

Project Name: ACPS IAQ Testing

PSS Project No.: 21082532

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

All sample receipt conditions were acceptable.

21082532: Analyses associated with analyst code 4051 were performed by
SGS North America - NY, 6601 Kirkville Road, East Syracuse, NY 13057 - NY 11626

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

21082532

SGS GALSON

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888-432-LABS (5227)

www.sgsgalson.com

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Client Account No.*:

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Baltimore, MD 21228

Phone No.* : 410-747-8770
Cell No. :
Email Results to : Amber Confer
Email address: reporting@phaseonline.com

Invoice To* : Phase Separation Science

Phone No.: 410-747-8770
Email : invoicing@phaseonline.com
P.O. No. : ODC 4920002-001
Credit Card : ☐ Card on File ☐ Call for Credit Card Info.

☑ Samples submitted using the FreePumpLoan™ Program ☐ Samples submitted using the FreeSamplingBadges™ Program

Need Results By:	(surcharge)
☑ Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name : T.C. Williams School Project : ACPS IAQ testing - 4920002 Sampled by : Karl Ford

Comments :
Dosimeter cartrige # noted in the (Hexavelent Chromium Process) colum

List description of industry or Process/interferences present in sampling area :
Public grade school building

State samples were collected in (e.g., NY)
VA

Please indicate which OEL this data will be used for :
☑ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA
☐ MSHA ☐ Other (specify):

Sample Identification* (Maxmium of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units*: L, ml,min,in2,cm2,ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
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TC - Hall E112	08/17/21	Assay N581 Aldehyde Badge	312	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4197
TC - Gym	08/17/21	Assay N581 Aldehyde Badge	289	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4198
TC - Auditorium	08/17/21	Assay N581 Aldehyde Badge	319	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4240
TC -Office A110	08/17/21	Assay N581 Aldehyde Badge	313	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4560
TC - Cafeteria	08/17/21	Assay N581 Aldehyde Badge	307	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4469
TC - Class B105	08/17/21	Assay N581 Aldehyde Badge	319	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4171
TC - Hall E136	08/17/21	Assay N581 Aldehyde Badge	305	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4846
TC - Media Center	08/17/21	Assay N581 Aldehyde Badge	263	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD5324
TC - Class A205	08/17/21	Assay N581 Aldehyde Badge	249	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4129
TC - Class C214	08/17/21	Assay N581 Aldehyde Badge	245	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4750

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Chain of Custody	Print Name/Signature	Date	Time		Print Name/Signature	Date	Time
Relinquished by :	Client	8/25/21	1735	Received by :			
Relinquished by :				Received by :			

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21082532

SGS GALSON

6601 Kirkville Rd
East Syracuse, NY 13057
Tel: (315) 432-5227
888-432-LABS (5227)

www.sgsgalson.com

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Client Account No.*:

Report To*: Phase Separation Science
6630 Baltimore National Pike
Baltimore, MD 21228

Phone No.*: 410-747-8770
Cell No.:
Email Results to: Amber Confer
Email address: reporting@phaseonline.com

Invoice To*: Phase Separation Science

Phone No.: 410-747-8770
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P.O. No.: ODC 4920002-001
Credit Card: ☐ Card on File ☐ Call for Credit Card Info.

☑ Samples submitted using the FreePumpLoan™ Program ☐ Samples submitted using the FreeSamplingBadges™ Program

Need Results By:	(surcharge)
☑ Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name: T.C. Williams School Project: ACPS IAQ testing - 4920002 Sampled by: Karl Ford

Comments:
Dosimeter cartrige # noted in the (Hexavelent Chromium Process) colum

List description of industry or Process/interferences present in sampling area:
Public grade school building

State samples were collected in (e.g., NY): VA

Please indicate which OEL this data will be used for: ☑ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA ☐ MSHA ☐ Other (specify):

Sample Identification* (Maxmium of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units*: L, ml,min,in2,cm2,ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
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TC - Class B333	08/17/21	Assay N581 Aldehyde Badge	218	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4290
TC - Hall C309	08/17/21	Assay N581 Aldehyde Badge	214	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD5430
TC - Class A328	08/17/21	Assay N581 Aldehyde Badge	220	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4546
		Assay N581 Aldehyde Badge			Formaldehyde	mod. OSHA 1007: TPLC/UV	
		Assay N581 Aldehyde Badge			Formaldehyde	mod. OSHA 1007: TPLC/UV	
		Assay N581 Aldehyde Badge			Formaldehyde	mod. OSHA 1007: TPLC/UV	
		Assay N581 Aldehyde Badge			Formaldehyde	mod. OSHA 1007: TPLC/UV	
		Assay N581 Aldehyde Badge			Formaldehyde	mod. OSHA 1007: TPLC/UV	
		Assay N581 Aldehyde Badge			Formaldehyde	mod. OSHA 1007: TPLC/UV	
		Assay N581 Aldehyde Badge			Formaldehyde	mod. OSHA 1007: TPLC/UV	

^Galson Laboratories will subsititute our routine/preferred method if it does not match the method listed on the COC unless this box is checked: ☑ Use method(s) listed on COC

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Relinquished by:	Client	8/25/21	1735	Received by:	[signature]		
Relinquished by:	[signature]			Received by:			

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PHASE SEPARATION SCIENCE

6630 Baltimore National Pike
Baltimore, MD 21228
410-747-8770
800-932-9047
www.phaseonline.com

Sample Receipt Checklist

Project Name: ACPS IAQ Testing
PSS Project No.: 21082532

Client Name Total Environmental Concepts - Lortc
Disposal Date 09/29/2021

Received By Amber Confer
Date Received 08/25/2021 05:35:00 PM
Delivered By Client
Tracking No Not Applicable
Logged In By Amber Confer

Shipping Container(s)
No. of Coolers 0

		Ice	N/A
Custody Seal(s) Intact?	N/A	Temp (deg C)	
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

		Sampler Name	Karl Ford
COC agrees with sample labels?	Yes	MD DW Cert. No.	N/A
Chain of Custody	Yes		

Sample Container

		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	Yes	Seal(s) Signed / Dated	Not Applicable
Intact?	Yes		
Labeled and Labels Legible?	Yes		

Holding Time

		Total No. of Samples Received	15
All Samples Received Within Holding Time(s)?	Yes	Total No. of Containers Received	15

Preservation

Total Metals	(pH<2)	N/A
Dissolved Metals, filtered within 15 minutes of collection	(pH<2)	N/A
Orthophosphorus, filtered within 15 minutes of collection		N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, DOC (field filtered), COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A
524 VOC (Rcvd with trip blanks)	(pH<2)	N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By: Amber Confer — Date: 08/26/2021

PM Review and Approval: Lynn Jackson — Date: 08/26/2021

SGS GALSON

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Need Results By:	(surcharge)
☑ Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
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☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name : T.C. Williams School Project : ACPS IAQ testing - 4920002 Sampled by : Karl Ford

Comments :
Dosimeter cartrige # noted in the (Hexavelent Chromium Process) colum

List description of industry or Process/interferences present in sampling area :
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VA

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☐ MSHA ☐ Other (specify):

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TC - Gym	08/17/21	Assay N581 Aldehyde Badge	289	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4198
TC - Auditorium	08/17/21	Assay N581 Aldehyde Badge	319	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4240
TC -Office A110	08/17/21	Assay N581 Aldehyde Badge	313	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4560
TC - Cafeteria	08/17/21	Assay N581 Aldehyde Badge	307	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4469
TC - Class B105	08/17/21	Assay N581 Aldehyde Badge	319	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4171
TC - Hall E136	08/17/21	Assay N581 Aldehyde Badge	305	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4846
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TC - Class A205	08/17/21	Assay N581 Aldehyde Badge	249	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4129
TC - Class C214	08/17/21	Assay N581 Aldehyde Badge	245	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4750

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TC -Office A110	08/17/21	Assay N581 Aldehyde Badge	313	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4560
TC - Cafeteria	08/17/21	Assay N581 Aldehyde Badge	307	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4469
TC - Class B105	08/17/21	Assay N581 Aldehyde Badge	319	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4171
TC - Hall E136	08/17/21	Assay N581 Aldehyde Badge	305	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4846
TC - Media Center	08/17/21	Assay N581 Aldehyde Badge	263	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD5324
TC - Class A205	08/17/21	Assay N581 Aldehyde Badge	249	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4129
TC - Class C214	08/17/21	Assay N581 Aldehyde Badge	245	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4750

^Galson Laboratories will subsitute our routine/preferred method if it does not match the method listed on the COC unless this box is checked: ☑ Use method(s) listed on COC

For metals analysis: if requesting an analyte with the option of a lower LOQ, please indicate if the lower LOQ is required (only available for certain analytes - see SAG):

For crystalline silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite)* :

Chain of Custody	Print Name/Signature	Date	Time		Print Name/Signature	Date	Time
Relinquished by :				Received by :			
Relinquished by :				Received by :			

Samples received after 3pm will be considered as next day's business
* Required fields, failure to complete these fields may result in a delay in your samples being processed.

Appendix E: 4-PCH Analytical Results

PHASE SEPARATION SCIENCE

6630 Baltimore National Pike
Baltimore, MD 21228
410-747-8770
800-932-9047
www.phaseonline.com

Certificate of Analysis

Project Name: ACPS IAQ Testing
PSS Project No.: 21082533

September 3, 2021

Karl Ford
Total Environmental Concepts - Lorton
8382 Terminal Road, Suite B
Lorton, VA 22079

Reference: PSS Project No: **21082533**
Project Name: ACPS IAQ Testing
Project Location: T.C.Williams School
Project ID.: 4920002

Dear Karl Ford:

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Project number(s) **21082533**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on September 29, 2021, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal
Laboratory Manager

PHASE SEPARATION SCIENCE

6630 Baltimore National Pike
Baltimore, MD 21228
410-747-8770
800-932-9047
www.phaseonline.com

Explanation of Qualifiers

Project Name: ACPS IAQ Testing

PSS Project No.: 21082533

Project ID: 4920002

The following samples were received under chain of custody by Phase Separation Science (PSS) on 08/25/2021 at 05:35 pm

PSS Sample ID	Sample ID	Matrix	Date/Time Collected
21082533-001	TC-Class E117	AIR	08/17/21 00:00
21082533-002	TC-Hall E112	AIR	08/17/21 00:00
21082533-003	TC-Gym	AIR	08/17/21 00:00
21082533-004	TC-Auditorium	AIR	08/17/21 00:00
21082533-005	TC-Office A110	AIR	08/17/21 00:00
21082533-006	TC-Cafeteria	AIR	08/17/21 00:00
21082533-007	TC-Class B105	AIR	08/17/21 00:00
21082533-008	TC-Hall E136	AIR	08/17/21 00:00
21082533-009	TC-Media Center	AIR	08/17/21 00:00
21082533-010	TC-Class A205	AIR	08/17/21 00:00
21082533-011	TC-Class C214	AIR	08/17/21 00:00
21082533-012	TC-Class B212	AIR	08/17/21 00:00
21082533-013	TC-Class B333	AIR	08/17/21 00:00
21082533-014	TC-Hall C309	AIR	08/17/21 00:00
21082533-015	TC-Hall A328	AIR	08/17/21 00:00

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

PHASE SEPARATION SCIENCE

6630 Baltimore National Pike
Baltimore, MD 21228
410-747-8770
800-932-9047
www.phaseonline.com

Explanation of Qualifiers

Project Name: ACPS IAQ Testing

PSS Project No.: 21082533

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

SGS GALSON

Ms. Amber Confer
Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

September 02, 2021

Account# 15354

Login# L545230

Dear Amber Confer:

Enclosed are the analytical results for the samples received by our laboratory on August 27, 2021. All samples on the chain of custody were received in good condition unless otherwise noted. Any additional observations will be noted on the chain of custody.

Please contact client services at (888) 432-5227 if you would like any additional information regarding this report. Thank you for using SGS Galson.

Sincerely,

SGS Galson

Lisa Swab
Laboratory Director

Enclosure(s)

Terms and Conditions & General Disclaimers

- This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.
- Any holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Analytical Disclaimers

- Unless otherwise noted within the report, all quality control results associated with the samples were within established control limits or did not impact reported results.
- Note: The findings recorded within this report were drawn from analysis of the sample(s) provided to the laboratory by the Client (or a third party acting at the Client's direction). The laboratory does not have control over the sampling process, including but not limited to the use of field equipment and collection media, as well as the sampling duration, collection volume or any other collection parameter used by the Client. The findings herein constitute no warranty of the sample's representativeness of any sampled environment, and strictly relate to the samples as they were presented to the laboratory. For recommended sampling collection parameters, please refer to the Sampling and Analysis Guide at www.sgsgalson.com.
- Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceding the final result column may have been rounded and therefore, if carried through the calculations, may not yield an identical final result to the one reported.
- The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).
- Unless otherwise noted within the report, results have not been blank corrected for any field blank or method blank data.

Accreditations SGS Galson holds a variety of accreditations and recognitions. Our quality management system conforms with the requirements of ISO/IEC 17025. Where applicable, samples may also be analyzed in accordance with the requirements of ELAP, NELAC, or LELAP under one of the state accrediting bodies listed below. Current Scopes of Accreditation can be viewed at http://www.sgsgalson.com in the accreditations section of the "About" page. To determine if the analyte tested falls under our scope of accreditation, please visit our website or call Client Services at (888) 432-5227.

National/International	Accreditation/Recognition	Lab ID#	Program/Sector
AIHA-LAP, LLC - IHLAP, ELLAP, EMLAP	ISO/IEC 17025 and USEPA NLLAP	Lab ID 100324	Industrial Hygiene, Environmental Lead, Environmental Microbiology

State	Accreditation/Recognition	Lab ID#	Program/Sector
New York (NYSDOH)	ELAP and NELAC (TNI)	Lab ID: 11626	Air Analysis, Solid and Hazardous Waste
New Jersey (NJDEP)	NELAC (TNI)	Lab ID: NY024	Air Analysis
Louisiana (LDEQ)	LELAP	Lab ID: 04083	Air Analysis, Solid Chemical Materials
Texas	Texas Dept. of Licensing and Regulation	Lab ID: 1042	Mold Analysis Laboratory license

Legend

< - Less than	mg - Milligrams	MDL - Method Detection Limit	ppb - Parts per Billion
> - Greater than	ug - Micrograms	NA - Not Applicable	ppm - Parts per Million
l - Liters	m3 - Cubic Meters	NS - Not Specified	ppbv - ppb Volume
LOQ - Limit of Quantitation	kg - Kilograms	ND - Not Detected	ppmv - ppm Volume
ft2 - Square Feet	cm2 - Square Centimeters	in2 - Square Inches	ng - Nanograms

SGS GALSON

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

LABORATORY ANALYSIS REPORT

Client : Phase Separation Science, Inc. Account No.: 15354
Site : T.C. WILLIAMS SCHOOL Login No. : L545230
Project No. : ACPS IAQ TESTING-4920002
Date Sampled : 17-AUG-21 Date Analyzed : 31-AUG-21
Date Received : 27-AUG-21 Report ID : 1262966

4-Phenylcyclohexene (4PCH low LOQ)

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
TC-CLASS E117	L545230-1	43.2	<0.2	<0.2	<0.2	<0.005	<0.0007
TC-HALL E112	L545230-2	41.4	<0.2	<0.2	<0.2	<0.005	<0.0008
TC-GYM	L545230-3	41.4	<0.2	<0.2	<0.2	<0.005	<0.0008
TC-AUDITORIUM	L545230-4	43.2	<0.2	<0.2	<0.2	<0.005	<0.0007
TC-OFFICE A110	L545230-5	42.6	<0.2	<0.2	<0.2	<0.005	<0.0007
TC-CAFETERIA	L545230-6	41	<0.2	<0.2	<0.2	<0.005	<0.0008
TC-CLASS B105	L545230-7	39.2	<0.2	<0.2	<0.2	<0.005	<0.0008
TC-HALL E136	L545230-8	25.8	<0.2	<0.2	<0.2	<0.008	<0.001
TC-MEDIA CENTER	L545230-9	48	<0.2	<0.2	<0.2	<0.004	<0.0007
TC-CLASS A205	L545230-10	38.4	<0.2	<0.2	<0.2	<0.005	<0.0008
TC-CLASS C214	L545230-11	39.6	<0.2	<0.2	<0.2	<0.005	<0.0008
TC-CLASS B212	L545230-12	41.2	<0.2	<0.2	<0.2	<0.005	<0.0008
TC-CLASS B333	L545230-13	38.4	<0.2	<0.2	<0.2	<0.005	<0.0008
TC-HALL C309	L545230-14	40	<0.2	<0.2	<0.2	<0.005	<0.0008
TC-CLASS A328	L545230-15	40.6	<0.2	<0.2	<0.2	<0.005	<0.0008

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of Quantitation: 0.2 ug
Analytical Method : mod. NIOSH 1501; GC/PID
Collection Media : 226-01

Submitted by: BDK
Date : 02-SEP-21
Supervisor : KAG

Approved by: MLN

SGS GALSON

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East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.sgsgalson.com

LABORATORY FOOTNOTE REPORT

Client Name : Phase Separation Science, Inc.
Site : T.C. WILLIAMS SCHOOL
Project No. : ACPS IAQ TESTING-4920002

Date Sampled : 17-AUG-21 Account No.: 15354
Date Received: 27-AUG-21 Login No. : L545230
Date Analyzed: 31-AUG-21

L545230 (Report ID: 1262966):
Total ug corrected for a desorption efficiency of 97%.
SOPs: GC-SOP-16(26), GC-SOP-8(27), GC-SOP-12(20)

L545230 (Report ID: 1262966):
Accuracy and mean recovery data presented below is based on a 95% confidence interval (k=2). The estimated accuracy applies to the media, technology, and SOP referenced in this report and does not account for the uncertainty associated with the sampling process. The accuracy is based solely on spike recovery data from internal quality control samples. Where N/A appears below, insufficient data is available to provide statistical accuracy and mean recovery values for the associated analyte.

Parameter	Accuracy	Mean Recovery
4-Phenylcyclohexene (4PCH low LOQ)	+/-18%	88.2%

L545230 21082533

SGS GALSON

1Z2313E40166972748
Date: 08/27/21
Shipper: UPS
Initials: MAK
Prep: UNKNOWN

☐ New Client? Client Account No.*:

Report To*: Phase Separation Science
6630 Baltimore National Pike
Baltimore, MD 21228

Phone No.*: 410-747-8770
Cell No.:
Email Results to: Amber Confer
Email address: reporting@phaseonline.com

Invoice To*: Phase Separation Science

6

Phone No.: 410-747-8770
Email: invoicing@phaseonline.com
P.O. No.: ODC 4920002-001
Credit Card: ☐ Card on File ☐ Call for Credit Card Info.

☑ Samples submitted using the FreePumpLoan™ Program ☐ Samples submitted using the FreeSamplingBadges™ Program

Need Results By:	(surcharge)
☑ 5BB Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name: T.C. Williams School Project: ACPS IAQ testing - 4920002 Sampled by: Karl Ford

Comments:

List description of industry or Process/interferences present in sampling area: Public grade school

State samples were collected in (e.g., NY): VA

Please indicate which OEL this data will be used for: ☑ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA ☐ MSHA ☐ Other (specify):

Sample Identification* (Maxmium of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units*: L, ml,min,in2,cm2,ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
TC - Class E117	08/17/21	Sm Charcoal tubes / 226-01	43.2	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Hall E112	08/17/21	Sm Charcoal tubes / 226-01	41.4	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Gym	08/17/21	Sm Charcoal tubes / 226-01	41.4	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Auditorium	08/17/21	Sm Charcoal tubes / 226-01	43.2	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC -Office A110	08/17/21	Sm Charcoal tubes / 226-01	42.6	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Cafeteria	08/17/21	Sm Charcoal tubes / 226-01	41.0	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Class B105	08/17/21	Sm Charcoal tubes / 226-01	39.2	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Hall E136	08/17/21	Sm Charcoal tubes / 226-01	25.8	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Media Center	08/17/21	Sm Charcoal tubes / 226-01	48.0	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Class A205	08/17/21	Sm Charcoal tubes / 226-01	38.4	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Class C214	08/17/21	Sm Charcoal tubes / 226-01	39.6	L	4-Phenylcyclohexene	mod. NIOSH 1501	

^Galson Laboratories will subsititute our routine/preferred method if it does not match the method listed on the COC unless this box is checked: ☑ Use method(s) listed on COC

For metals analysis: if requesting an analyte with the option of a lower LOQ, please indicate if the lower LOQ is required (only available for certain analytes - see SAG):

For crystalline silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite)*:

Chain of Custody	Print Name/Signature	Date	Time		Print Name/Signature	Date	Time
Relinquished by:	Client	8/25/21	1735	Received by:			
Relinquished by:				Received by:	Michelle Krause	8/27/21	1117

Samples received after 3pm will be considered as next day's business

* Required fields, failure to complete these fields may result in a delay in your samples being processed.

Page 1 of 2

21082533

SGS GALSON

6601 Kirkville Rd
East Syracuse, NY 13057
Tel: (315) 432-5227
888-432-LABS (5227)

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☐ New Client?

Client Account No.*:

Report To*: Phase Separation Science
6630 Baltimore National Pike
Baltimore, MD 21228

Phone No.*: 410-747-8770
Cell No.:
Email Results to: Amber Confer
Email address: reporting@phaseonline.com

Invoice To*: Phase Separation Science

Phone No.: 410-747-8770
Email: invoicing@phaseonline.com
P.O. No.: ODC 4920002-001
Credit Card: ☐ Card on File ☐ Call for Credit Card Info.

☑ Samples submitted using the FreePumpLoan™ Program ☐ Samples submitted using the FreeSamplingBadges™ Program

Need Results By:	(surcharge)
☑ Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name: T.C. Williams School Project: ACPS IAQ testing - 4920002 Sampled by: Karl Ford

Comments:

List description of industry or Process/interferences present in sampling area: Public grade school

State samples were collected in (e.g., NY): VA

Please indicate which OEL this data will be used for: ☑ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA ☐ MSHA ☐ Other (specify):

Sample Identification* (Maxmium of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units*: L, ml,min,in2,cm2,ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
TC - Class B212	08/17/21	Sm Charcoal tubes / 226-01	41.2	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Class B333	08/17/21	Sm Charcoal tubes / 226-01	38.4	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Hall C309	08/17/21	Sm Charcoal tubes / 226-01	40.0	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Class A328	08/17/21	Sm Charcoal tubes / 226-01	40.6	L	4-Phenylcyclohexene	mod. NIOSH 1501	
		Sm Charcoal tubes / 226-01		L	4-Phenylcyclohexene	mod. NIOSH 1501	
		Sm Charcoal tubes / 226-01		L	4-Phenylcyclohexene	mod. NIOSH 1501	
		Sm Charcoal tubes / 226-01		L	4-Phenylcyclohexene	mod. NIOSH 1501	
		Sm Charcoal tubes / 226-01		L	4-Phenylcyclohexene	mod. NIOSH 1501	
		Sm Charcoal tubes / 226-01		L	4-Phenylcyclohexene	mod. NIOSH 1501	
		Sm Charcoal tubes / 226-01			4-Phenylcyclohexene	mod. NIOSH 1501	
		Sm Charcoal tubes / 226-01			4-Phenylcyclohexene	mod. NIOSH 1501	

^Galson Laboratories will subsititute our routine/preferred method if it does not match the method listed on the COC unless this box is checked: ☑ Use method(s) listed on COC

For metals analysis: if requesting an analyte with the option of a lower LOQ, please indicate if the lower LOQ is required (only available for certain analytes - see SAG):

For crystalline silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite)*:

Chain of Custody	Print Name/Signature	Date	Time		Print Name/Signature	Date	Time
Relinquished by:	Client	8/25/21	1735	Received by:	Amber Confer		
Relinquished by:	Amber Confer			Received by:	Michelle Krause Michelle Krause	8/27/21	11:17

Samples received after 3pm will be considered as next day's business

* Required fields, failure to complete these fields may result in a delay in your samples being processed.

(6)

Chain of Custody Form for Subcontracted Analyses

Phase Separation Science, Inc
6630 Baltimore National Pike
Baltimore, MD 21228
Phone: (410) 747-8770
Fax: (410) 788-8723

For Questions or issues please contact: Amber Confer

W.O. No. : 21082533
Project Location : T.C.Williams School
Project Number : 4920002
Report To LOD : No

Samples Transferred To:
SGS North America - NY
6601 Kirkville Road
East Syracuse, NY 13057
Old SGS Galson Labs. bsc
Phone : 315-432-5227

Report Due On :09/03/21 05:00

Lab Sample ID	Field Sample ID	Date Sampled	Time Sampled	Matrix	Analyses Required	Method	Type of Container	Preservative
21082533-001	TC-Class E117	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON
21082533-002	TC-Hall E112	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON
21082533-003	TC-Gym	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON
21082533-004	TC-Auditorium	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON
21082533-005	TC-Office A110	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON
21082533-006	TC-Cafeteria	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON
21082533-007	TC-Class B105	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON
21082533-008	TC-Hall E136	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON
21082533-009	TC-Media Center	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON
21082533-010	TC-Class A205	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON
21082533-011	TC-Class C214	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON
21082533-012	TC-Class B212	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON
21082533-013	TC-Class B333	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON
21082533-014	TC-Hall C309	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON
21082533-015	TC-Hall A328	08/17/21	00:00	Air	4-Phenylcyclohexene	VARIOUS	NONSC	NON

Data Deliverables Required: COA

Perform Q.C. on Sample : ______

Send Report Attn : reporting@phaseonline.com

Send InvoiceAttn : invoicing@phaseonline.com

Airbill No.: ______ Carrier : UPS

Condition Upon Receipt : ______

Comments :

Samples Relinquished By : [signature] Date : ______ Time: ______ Samples Received By : ______

Samples Relinquished By: ______ Date : ______ Time : ______ Samples Received By: ______

Samples Relinquished By: ______ Date: ______ Time: ______ Samples Received By: Michelle Krause [signature] 8/27/21 11:17

6630 Baltimore National Pike
Baltimore, MD 21228
410-747-8770
800-932-9047
www.phaseonline.com

Project Name: ACPS IAQ Testing

PSS Project No.: 21082533

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

All sample receipt conditions were acceptable.

21082533: Analyses associated with analyst code 4051 were performed by
SGS North America - NY, 6601 Kirkville Road, East Syracuse, NY 13057 - NY 11626

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

21082533

SGS GALSON

6601 Kirkville Rd
East Syracuse, NY 13057
Tel: (315) 432-5227
888-432-LABS (5227)

www.sgsgalson.com

☐ New Client?

Client Account No.*:

Report To* : Phase Separation Science
6630 Baltimore National Pike
Baltimore, MD 21228

Phone No.* : 410-747-8770
Cell No. :
Email Results to : Amber Confer
Email address: reporting@phaseonline.com

Invoice To* : Phase Separation Science

Phone No.: 410-747-8770
Email : invoicing@phaseonline.com
P.O. No. : ODC 4920002-001
Credit Card : ☐ Card on File ☐ Call for Credit Card Info.

☑ Samples submitted using the FreePumpLoan™ Program ☐ Samples submitted using the FreeSamplingBadges™ Program

Need Results By:	(surcharge)
☑ Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name : T.C. Williams School Project : ACPS IAQ testing - 4920002 Sampled by : Karl Ford

Comments :

List description of industry or Process/interferences present in sampling area : Public grade school

State samples were collected in (e.g., NY) VA

Please indicate which OEL this data will be used for : ☑ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA ☐ MSHA ☐ Other (specify):

Sample Identification* (Maxmium of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units*: L, ml,min,in2,cm2,ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
TC - Class E117	08/17/21	Sm Charcoal tubes / 226-01	43.2	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Hall E112	08/17/21	Sm Charcoal tubes / 226-01	41.4	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Gym	08/17/21	Sm Charcoal tubes / 226-01	41.4	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Auditorium	08/17/21	Sm Charcoal tubes / 226-01	43.2	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC -Office A110	08/17/21	Sm Charcoal tubes / 226-01	42.6	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Cafeteria	08/17/21	Sm Charcoal tubes / 226-01	41.0	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Class B105	08/17/21	Sm Charcoal tubes / 226-01	39.2	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Hall E136	08/17/21	Sm Charcoal tubes / 226-01	25.8	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Media Center	08/17/21	Sm Charcoal tubes / 226-01	48.0	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Class A205	08/17/21	Sm Charcoal tubes / 226-01	38.4	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Class C214	08/17/21	Sm Charcoal tubes / 226-01	39.6	L	4-Phenylcyclohexene	mod. NIOSH 1501	

^Galson Laboratories will subsititute our routine/preferred method if it does not match the method listed on the COC unless this box is checked: ☑ Use method(s) listed on COC

For metals analysis: if requesting an analyte with the option of a lower LOQ, please indicate if the lower LOQ is required (only available for certain analytes - see SAG):

For crystalline silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite)* :

Chain of Custody	Print Name/Signature	Date	Time		Print Name/Signature	Date	Time
Relinquished by :	Client	8/25/21	1735	Received by :	Amber Confer		
Relinquished by :	Amber Confer			Received by :			

Samples received after 3pm will be considered as next day's business
* Required fields, failure to complete these fields may result in a delay in your samples being processed.

Page 1 of 2

21082533

SGS GALSON

6601 Kirkville Rd
East Syracuse, NY 13057
Tel: (315) 432-5227
888-432-LABS (5227)

www.sgsgalson.com

☐ New Client?

Report To* : Phase Separation Science
6630 Baltimore National Pike
Baltimore, MD 21228

Client Account No.*:

Phone No.* : 410-747-8770
Cell No. :
Email Results to : Amber Confer
Email address: reporting@phaseonline.com

Invoice To* : Phase Separation Science

Phone No.: 410-747-8770
Email : invoicing@phaseonline.com
P.O. No. : ODC 4920002-001
Credit Card : ☐ Card on File ☐ Call for Credit Card Info.

☑ Samples submitted using the FreePumpLoan™ Program ☐ Samples submitted using the FreeSamplingBadges™ Program

Need Results By:	(surcharge)
☑ Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name : T.C. Williams School Project : ACPS IAQ testing - 4920002 Sampled by : Karl Ford

Comments :

List description of industry or Process/interferences present in sampling area : Public grade school

State samples were collected in (e.g., NY): VA

Please indicate which OEL this data will be used for : ☑ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA ☐ MSHA ☐ Other (specify):

Sample Identification* (Maxmium of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units*: L, ml,min,in2,cm2,ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
TC - Class B212	08/17/21	Sm Charcoal tubes / 226-01	41.2	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Class B333	08/17/21	Sm Charcoal tubes / 226-01	38.4	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Hall C309	08/17/21	Sm Charcoal tubes / 226-01	40.0	L	4-Phenylcyclohexene	mod. NIOSH 1501	
TC - Class A328	08/17/21	Sm Charcoal tubes / 226-01	40.6	L	4-Phenylcyclohexene	mod. NIOSH 1501	
		Sm Charcoal tubes / 226-01		L	4-Phenylcyclohexene	mod. NIOSH 1501	
		Sm Charcoal tubes / 226-01		L	4-Phenylcyclohexene	mod. NIOSH 1501	
		Sm Charcoal tubes / 226-01		L	4-Phenylcyclohexene	mod. NIOSH 1501	
		Sm Charcoal tubes / 226-01		L	4-Phenylcyclohexene	mod. NIOSH 1501	
		Sm Charcoal tubes / 226-01		L	4-Phenylcyclohexene	mod. NIOSH 1501	
		Sm Charcoal tubes / 226-01			4-Phenylcyclohexene	mod. NIOSH 1501	
		Sm Charcoal tubes / 226-01			4-Phenylcyclohexene	mod. NIOSH 1501	

^Galson Laboratories will subsititute our routine/preferred method if it does not match the method listed on the COC unless this box is checked: ☑ Use method(s) listed on COC

For metals analysis: if requesting an analyte with the option of a lower LOQ, please indicate if the lower LOQ is required (only available for certain analytes - see SAG):

For crystalline silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite)* :

Chain of Custody	Print Name/Signature	Date	Time		Print Name/Signature	Date	Time
Relinquished by :	Client	8/25/21	1735	Received by :	Amber L Confer		
Relinquished by :	Amber L Confer			Received by :			

Samples received after 3pm will be considered as next day's business

* Required fields, failure to complete these fields may result in a delay in your samples being processed.

Page 2 of 2

PHASE SEPARATION SCIENCE

6630 Baltimore National Pike
Baltimore, MD 21228
410-747-8770
800-932-9047
www.phaseonline.com

Sample Receipt Checklist

Project Name: ACPS IAQ Testing
PSS Project No.: 21082533

Client Name	Total Environmental Concepts - Lortc	**Received By**	Amber Confer
Disposal Date	09/29/2021	**Date Received**	08/25/2021 05:35:00 PM
		Delivered By	Client
		Tracking No	Not Applicable
		Logged In By	Amber Confer

Shipping Container(s)

No. of Coolers 0

		Ice	N/A
Custody Seal(s) Intact?	N/A	Temp (deg C)	
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No
Documentation		Sampler Name	Karl Ford
COC agrees with sample labels?	Yes	MD DW Cert. No.	N/A
Chain of Custody	Yes		
Sample Container		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	Yes	Seal(s) Signed / Dated	Not Applicable
Intact?	Yes		
Labeled and Labels Legible?	Yes		
Holding Time		Total No. of Samples Received	15
All Samples Received Within Holding Time(s)?	Yes	Total No. of Containers Received	15

Preservation

Total Metals	(pH<2)	N/A
Dissolved Metals, filtered within 15 minutes of collection	(pH<2)	N/A
Orthophosphorus, filtered within 15 minutes of collection		N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, DOC (field filtered), COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A
524 VOC (Rcvd with trip blanks)	(pH<2)	N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By: Amber Confer — Date: 08/26/2021

PM Review and Approval: Lynn Jackson — Date: 08/26/2021

SGS GALSON

6601 Kirkville Rd
East Syracuse, NY 13057
Tel: (315) 432-5227
888-432-LABS (5227)

www.sgsgalson.com

☐ New Client?

Client Account No.*:

Report To* : Phase Separation Science
6630 Baltimore National Pike
Baltimore, MD 21228

Phone No.* : 410-747-8770
Cell No. :
Email Results to : Amber Confer
Email address: reporting@phaseonline.com

Invoice To* : Phase Separation Science

Phone No.: 410-747-8770
Email : invoicing@phaseonline.com
P.O. No. : ODC 4920002-001
Credit Card : ☐ Card on File ☐ Call for Credit Card Info.

☑ Samples submitted using the FreePumpLoan™ Program ☐ Samples submitted using the FreeSamplingBadges™ Program

Need Results By:	(surcharge)
☐ Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name : T.C. Williams School Project : ACPS IAQ testing - 4920002 Sampled by : Karl Ford

Comments :
Dosimeter cartrige # noted in the (Hexavelent Chromium Process) colum

List description of industry or Process/interferences present in sampling area :
Public grade school building

State samples were collected in (e.g., NY)
VA

Please indicate which OEL this data will be used for :
☑ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA
☐ MSHA ☐ Other (specify):

Sample Identification* (Maxmium of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units*: L, ml,min,in2,cm2,ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
TC - Class E117	08/17/21	Assay N581 Aldehyde Badge	304	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4334
TC - Hall E112	08/17/21	Assay N581 Aldehyde Badge	312	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4197
TC - Gym	08/17/21	Assay N581 Aldehyde Badge	289	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4198
TC - Auditorium	08/17/21	Assay N581 Aldehyde Badge	319	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4240
TC -Office A110	08/17/21	Assay N581 Aldehyde Badge	313	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4560
TC - Cafeteria	08/17/21	Assay N581 Aldehyde Badge	307	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4469
TC - Class B105	08/17/21	Assay N581 Aldehyde Badge	319	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4171
TC - Hall E136	08/17/21	Assay N581 Aldehyde Badge	305	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4846
TC - Media Center	08/17/21	Assay N581 Aldehyde Badge	263	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD5324
TC - Class A205	08/17/21	Assay N581 Aldehyde Badge	249	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4129
TC - Class C214	08/17/21	Assay N581 Aldehyde Badge	245	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4750

^Galson Laboratories will subsitute our routine/preferred method if it does not match the method listed on the COC unless this box is checked: ☑ Use method(s) listed on COC

For metals analysis: if requesting an analyte with the option of a lower LOQ, please indicate if the lower LOQ is required (only available for certain analytes - see SAG):

For crystalline silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite)* :

Chain of Custody	Print Name/Signature	Date	Time		Print Name/Signature	Date	Time
Relinquished by :				Received by :			
Relinquished by :				Received by :			

Samples received after 3pm will be considered as next day's business
* Required fields, failure to complete these fields may result in a delay in your samples being processed.

SGS GALSON

6601 Kirkville Rd
East Syracuse, NY 13057
Tel: (315) 432-5227
888-432-LABS (5227)

www.sgsgalson.com

☐ New Client?

Client Account No.*:

Report To* : Phase Separation Science
6630 Baltimore National Pike
Baltimore, MD 21228

Phone No.* : 410-747-8770
Cell No. :
Email Results to : Amber Confer
Email address: reporting@phaseonline.com

Invoice To* : Phase Separation Science

Phone No.: 410-747-8770
Email : invoicing@phaseonline.com
P.O. No. : ODC 4920002-001
Credit Card : ☐ Card on File ☐ Call for Credit Card Info.

☑ Samples submitted using the FreePumpLoan™ Program ☐ Samples submitted using the FreeSamplingBadges™ Program

Need Results By:	(surcharge)
☐ Standard	0%
☐ 4 Business Days	35%
☐ 3 Business Days	50%
☐ 2 Business Days	75%
☐ Next Day by 6pm	100%
☐ Next Day by Noon	150%
☐ Same Day	200%

Site Name : T.C. Williams School Project : ACPS IAQ testing - 4920002 Sampled by : Karl Ford

Comments :
Dosimeter cartrige # noted in the (Hexavelent Chromium Process) colum

List description of industry or Process/interferences present in sampling area :
Public grade school building

State samples were collected in (e.g., NY)
VA

Please indicate which OEL this data will be used for :
☑ OSHA PEL ☐ ACGIH TLV ☐ Cal OSHA
☐ MSHA ☐ Other (specify):

Sample Identification* (Maxmium of 20 Characters)	Date Sampled	Collection Medium	Sample Volume Sample Time Sample Area*	Sample Units*: L, ml,min,in2,cm2,ft2	Analysis Requested*	Method Reference^	Hexavalent Chromium Process (e.g., welding plating, painting, etc.)*
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TC - Hall E112	08/17/21	Assay N581 Aldehyde Badge	312	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4197
TC - Gym	08/17/21	Assay N581 Aldehyde Badge	289	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4198
TC - Auditorium	08/17/21	Assay N581 Aldehyde Badge	319	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4240
TC -Office A110	08/17/21	Assay N581 Aldehyde Badge	313	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4560
TC - Cafeteria	08/17/21	Assay N581 Aldehyde Badge	307	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4469
TC - Class B105	08/17/21	Assay N581 Aldehyde Badge	319	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4171
TC - Hall E136	08/17/21	Assay N581 Aldehyde Badge	305	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4846
TC - Media Center	08/17/21	Assay N581 Aldehyde Badge	263	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD5324
TC - Class A205	08/17/21	Assay N581 Aldehyde Badge	249	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4129
TC - Class C214	08/17/21	Assay N581 Aldehyde Badge	245	Min	Formaldehyde	mod. OSHA 1007: TPLC/UV	PD4750

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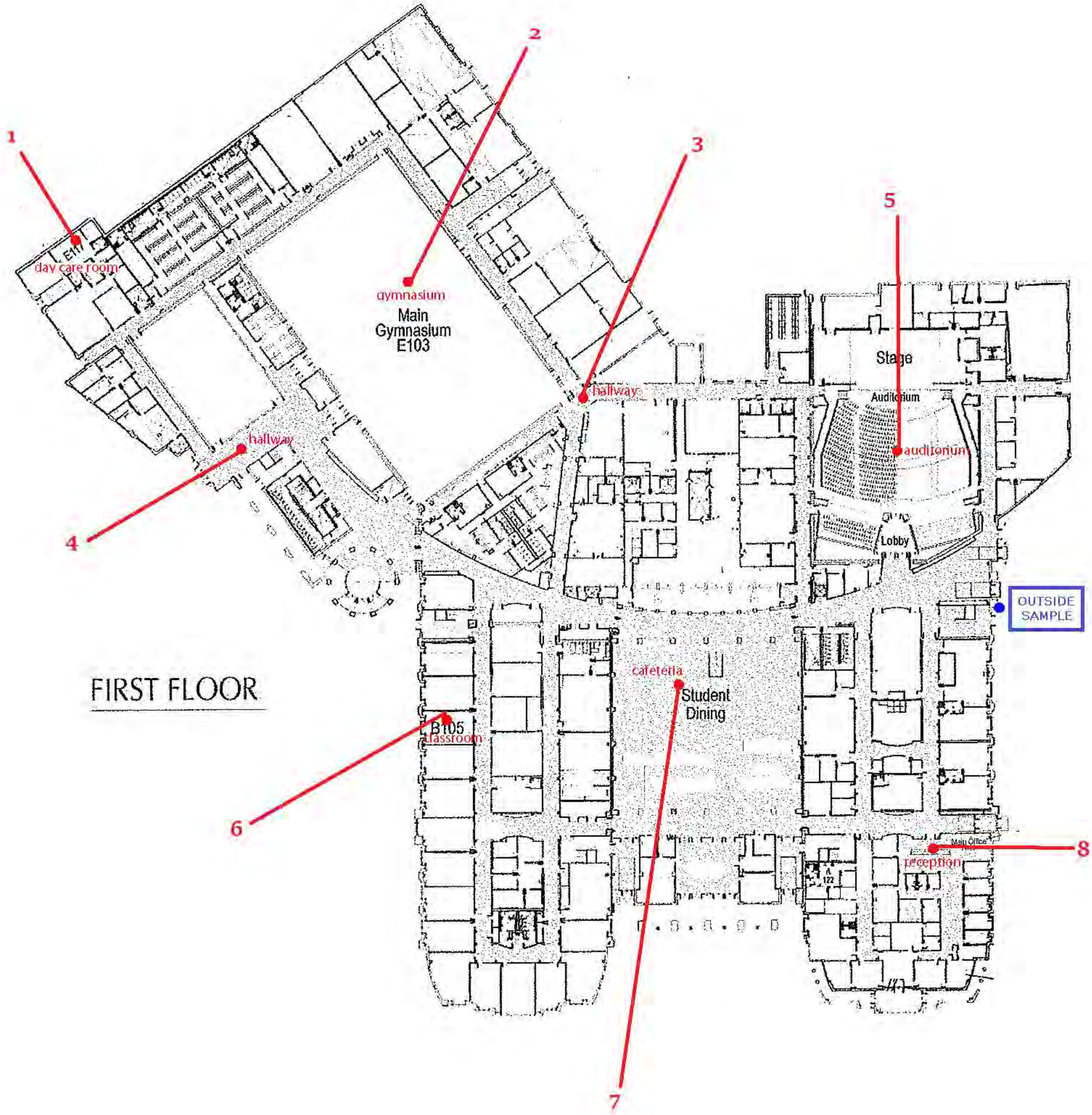
For metals analysis: if requesting an analyte with the option of a lower LOQ, please indicate if the lower LOQ is required (only available for certain analytes - see SAG):

For crystalline silica: form(s) of silica needed must be indicated (Quartz, Cristobalite, and/or Tridymite)* :

Chain of Custody	Print Name/Signature	Date	Time		Print Name/Signature	Date	Time
Relinquished by :				Received by :			
Relinquished by :				Received by :			

Samples received after 3pm will be considered as next day's business
* Required fields, failure to complete these fields may result in a delay in your samples being processed.

Appendix F: Sampling Locations



LEGEND

- Sample Location Analyzed For:
  - Mold
  - Radon
  - VOC's (TO+15)
  - 4-polycyclohexene
  - Formaldehyde

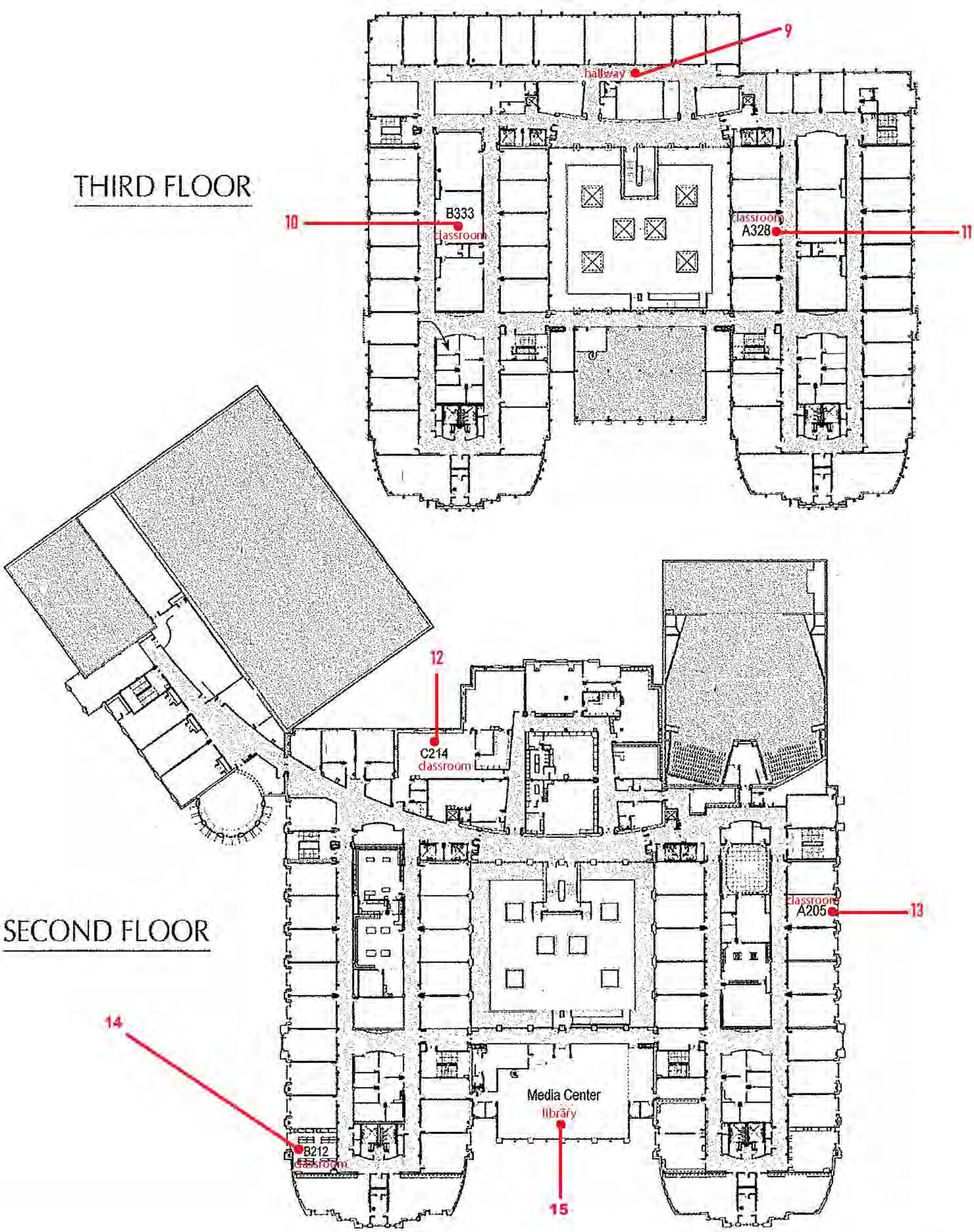
Alexandria City High School

3330 King Street
Alexandria, VA 22302

N

Total Environmental Concepts, Inc.
8382 Terminal Road, Suite B
Lorton, VA 22079
Phone: 703-567-4346
Fax: 703-567-3487

Figure 1



LEGEND

- Sample Location Analyzed For:
  - Mold
  - Radon
  - VOC's (TO+15)
  - 4-polycyclohexene
  - Formaldehyde

Alexandria City High School

3330 King Street
Alexandria, VA 22302

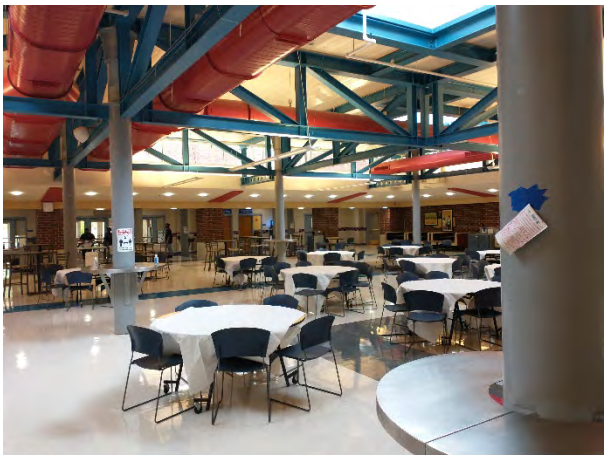
N

Total Environmental Concepts, Inc.
8382 Terminal Road, Suite B
Lorton, VA 22079
Phone: 703-567-4346
Fax: 703-567-3487

Figure 2

Appendix G: Photographs

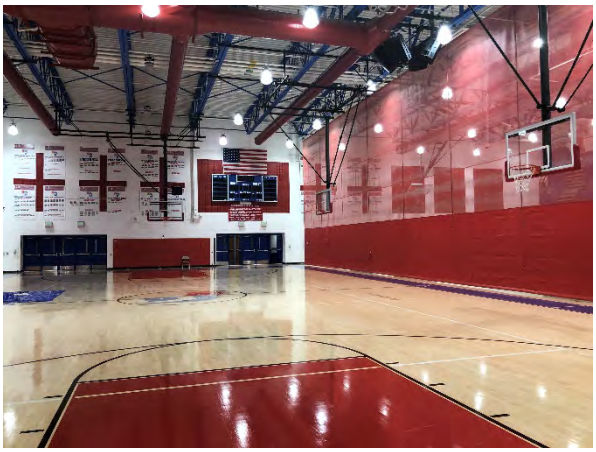
Alexandria City, Media Center



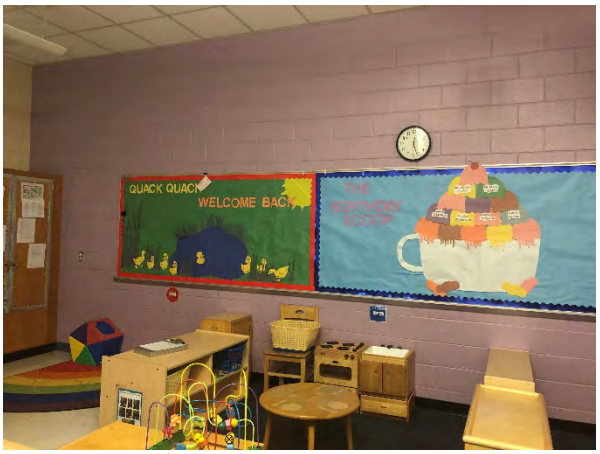
Alexandria City, Cafeteria

Alexandria City, Auditorium

Alexandria City, Classroom



Alexandria City, Gym



Alexandria City, Daycare Room