LIMITED LEAD AND COPPER DRINKING WATER
JUNE 2021 SAMPLING EVENT

ACPS TRANSPORTATION FACILITY

3540 WHEELER AVENUE
ALEXANDRIA, VIRGINIA 22304

ECS PROJECT NO. 47:11652-E

FOR: ALEXANDRIA CITY PUBLIC SCHOOLS

JULY 16, 2021

July 16, 2021

Mr. John Contreras
Alexandria City Public Schools
1340 Braddock Place
Alexandria, Virginia 22314
john.contreras@acps.k12.va.us

ECS Project No. 47:11652-E

Reference: Limited Lead and Copper Drinking Water June 2021 Sampling Event, ACPS Transportation Facility, 3540 Wheeler Avenue, Alexandria, Virginia

Dear Mr. Contreras:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools with the results of the Limited Lead and Copper Drinking Water June 2021 Sampling Event performed at ACPS Transportation Facility located at 3540 Wheeler Avenue in Alexandria, Virginia. This report summarizes our observations, analytical results, findings, and recommendations related to the work performed. The work described in this report was performed by ECS in general accordance with the Scope of Services described in ECS Proposal Number 47:16189-EP and the terms and conditions of the agreement authorizing those services.

ECS appreciates this opportunity to provide Alexandria City Public Schools with our services. If we can be of further assistance to you, please do not hesitate to contact us.

Sincerely,

ECS Mid-Atlantic, LLC

Jennifer Turner
Environmental Scientist
jturner1@ecslimited.com
202-400-2188

Michael Hamill, CIH
Senior Project Manager
MHamill@ecslimited.com
703-471-8400

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1.0 SITE DESCRIPTION

The ACPS Transportation Facility is a two-story warehouse building located at 3540 Wheeler Avenue in Alexandria, Virginia. The building is currently occupied and is used by Alexandria City Public Schools (ACPS) as a school. The site is located within Alexandria and is under the jurisdiction of the City of Alexandria and U.S. Environmental Protection Agency (EPA) drinking water regulations.

The site receives water from Virginia American Water, which is classified as a public drinking water system by the EPA under the Safe Drinking Water Act (SDWA). This ACPS building is connected to a public water system and therefore; does not have its own water supply nor is it considered a non-transient, non-community water system (NTNCWS) as defined by the EPA's Lead and Copper Rule.

2.0 PURPOSE

ECS previously provided lead and copper drinking water testing at the Transportation Facility in January 2020. The purpose of this water sampling event was to perform periodic testing of the warehouse to identify if the sinks, water fountains, bottle refilling stations, and/or bubblers within the above-referenced building contain lead and/or copper concentrations in excess of the EPA's Lead and Copper Rule action levels as a part of the ACPS 3-year rotating sampling plan. The purpose of this sampling event was a screening of the potable outlets (sinks, water fountains, bottle refilling stations, and bubblers excluding gang bathroom sinks) within the building.

The EPA created the Lead and Copper Rule under the SWDA. The EPA's Lead and Copper Rule established a lead action level of 0.015 mg/L (milligrams/liter) or 0.015 parts per million (PPM). The EPA's Lead and Copper Rule established a copper action level of 1.3 mg/L or 1.3 PPM. Note that ACPS buildings are not regulated by the EPA's Lead and Copper Rule because they do not meet the definition of a public water system as defined in EPA's 40 CFR Section 141 Subpart A.

The Code of Virginia § 22.1-135.1 currently requires Virginia school boards to develop and implement a plan to test, and if necessary, remediate potable water sources identified by the US EPA as a high priority. Each local school board shall submit testing plans and laboratory results to the Department of Health. If potable water sources are detected at or above 10 parts per billion (0.010 PPM), the school board shall notify parents of such results.

The US EPA's 3Ts for Reducing Lead in Drinking Water in Schools: Revised Technical Guidance (EPA 815-B-18-007) was created to provide recommendations on how to address lead in drinking water in schools and child care facilities. The procedures and response actions outlined in the EPA's 3Ts document are recommendations not requirements. The EPA's 3Ts guidance document does not set action levels for lead or copper in drinking water but it does reference the action levels created for public water systems in the EPA's Lead and Copper Rule. The results of this water sampling event will be compared to the action levels set in the EPA's Lead and Copper Rule.

3.0 METHODOLOGY

ECS performed the authorized Scope of Services in general accordance with our proposal, standard industry practice(s) and methods specified by regulation(s) for sampling drinking water.

3.1 Lead and Copper Drinking Water

Sample protocols were performed in general accordance with the US EPA's 3Ts for Reducing Lead in Drinking Water in Schools: Revised Technical Guidance (EPA 815-B-18-007) and the US EPA's Lead and Copper Rule. Water samples were collected from approximately 20% of the accessible potable water sources within the building including sinks, water fountains, and bottle refilling stations, with a minimum of two samples per floor. Samples were not collected from the exterior of the building or from janitor slop sinks.

ECS coordinated the water sampling with ACPS officials, and it is ECS's understanding that all of the water sources sampled were not in use at least 8 hours prior to sampling. ACPS personnel granted ECS access to the building. ECS attempted to access all drinking water sources within the building. During sampling, initial draw samples were collected. The samples were collected in 250 mL bottles with a nitric acid preservative. These water bottles were provided to ECS by Maryland Spectral Services, Inc. The water samples were provided with unique identification labels which include the school initials, a sequential number identifier, and sample location identifier.

The collected water samples were sealed and transported by courier to Maryland Spectral Services, Inc. located in Baltimore, Maryland. The water samples were submitted for lead and copper drinking water analysis per EPA Method 200.8.

Please note that efforts were made to collect samples from selected outlets in accordance with the methodology described above. Some areas within the building were locked. ECS was not able to sample outlets in the locked areas.

4.0 RESULTS

The following is a summary of laboratory results, findings and observations.

4.1 Lead in Drinking Water

None of the water samples collected were reported to have concentrations above the EPA lead action level of 0.015 mg/L (PPM). In total, five (5) water samples were collected from the building. A table of the collected samples and the associated analytical results can be found in the appendices. Note that the analytical results displayed in the table have been converted to mg/L (PPM) for easy reference. A copy of the laboratory analytical results and chain of custody are attached to this report. A sketch identifying the approximate location of each water sample can also be found in the appendices.

4.2 Copper in Drinking Water

None of the water samples collected were reported to have concentrations above the EPA copper action level of 1.3 mg/L (PPM). In total, five (5) water samples were collected from the building. A table of the collected samples and the associated analytical results can be found in the appendices. Note that the analytical results displayed in the table have been converted to mg/L (PPM) for easy reference. A copy of the laboratory analytical results and chain of custody are attached to this report. A sketch identifying the approximate location of each water sample can also be found in the appendices.

5.0 RECOMMENDATIONS AND REGULATORY REQUIREMENTS

Based on our understanding of the purpose of the Limited Lead and Copper Drinking Water June 2021 Sampling Event, the results of laboratory analysis, and our findings and observations, ECS presents the following recommendations.

5.1 Lead in Drinking Water

The sample results were reported below the EPA's Lead and Copper Rule copper action level. No additional testing or remediation action in response to this copper drinking water sampling event is recommended at this time.

The EPA does not specify a specific time frame for which follow-up testing for schools needs to be performed. The EPA suggests that schools and child care facilities make testing a part of their routine building operations and states that annual monitoring provides information on changing concentrations and the effectiveness of remediation or treatment options. As good practice, ECS recommends including this building in a comprehensive periodic follow-up screening sampling plan in which screening samples should be collected from this building at a minimum of every three years. If additional guidelines or regulations are enacted at a state or federal level in the future, the frequency of testing should be modified to reflect these changes.

5.2 Copper in Drinking Water

The sample results were reported below the EPA's Lead and Copper Rule copper action level. No additional testing or remediation action in response to this copper drinking water sampling event is recommended at this time.

The EPA does not specify a specific time frame for which follow-up testing for schools needs to be performed. The EPA suggests that schools and child care facilities make testing a part of their routine building operations and states that annual monitoring provides information on changing concentrations and the effectiveness of remediation or treatment options. As good practice, ECS recommends including this building in a comprehensive periodic follow-up screening sampling plan in which screening samples should be collected from this building at a minimum of every three years. If additional guidelines or regulations are enacted at a state or federal level in the future, the frequency of testing should be modified to reflect these changes.

6.0 LIMITATIONS

The conclusions and recommendations presented within this report are based upon a reasonable level of assessment within normal bounds and standards of professional practice for a site in this particular geographic setting. ECS is not responsible or liable for the discovery and elimination of hazards that may potentially cause damage, accidents, or injuries.

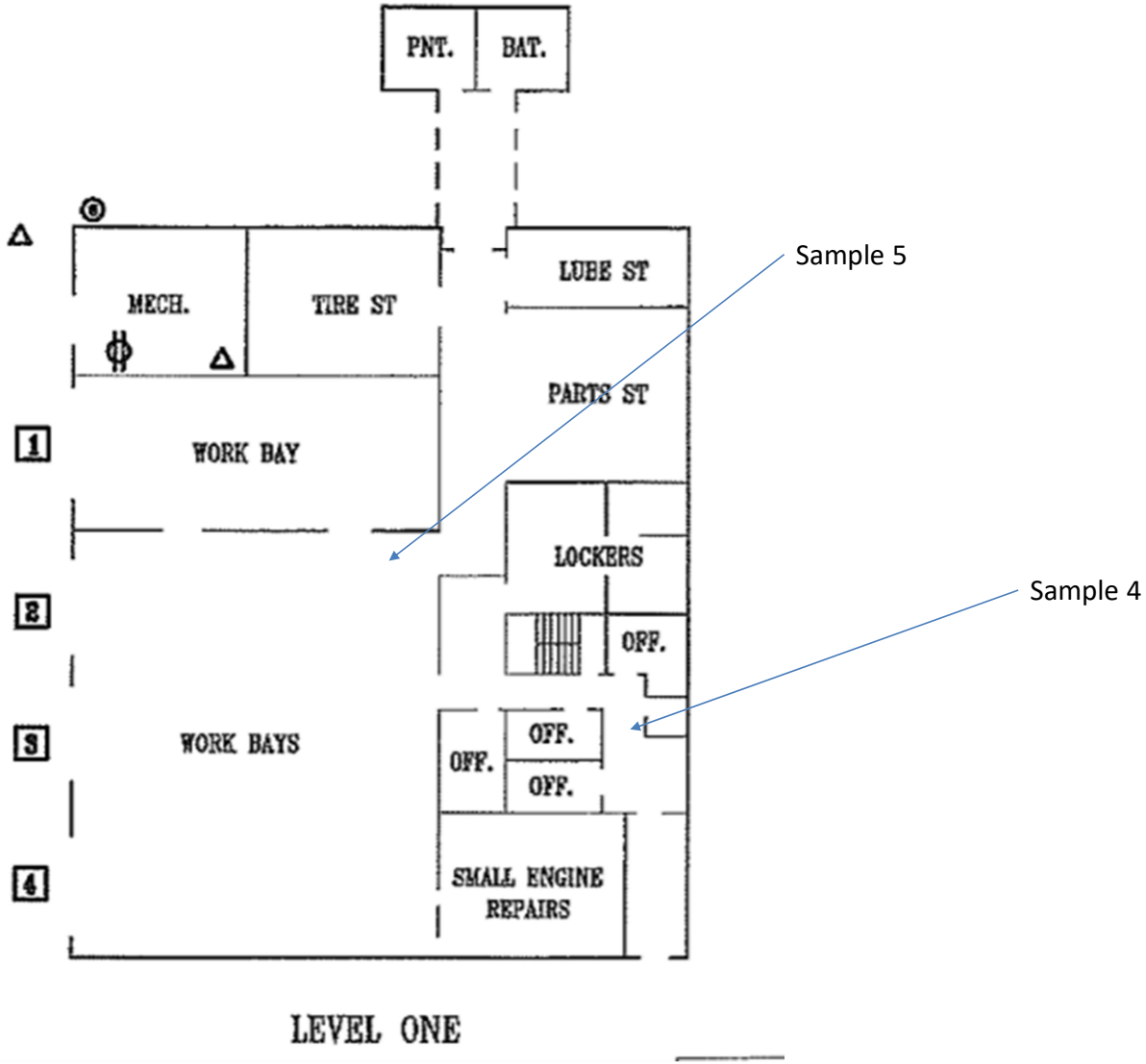
The observations, conclusions, and recommendations pertaining to environmental conditions at the subject site are necessarily limited to conditions observed, and/or materials reviewed at the time this study was undertaken. No warranty, expressed or implied, is made with regard to the conclusions

and recommendations presented within this report. This report is provided for the exclusive use of the client. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties without the written consent of ECS and the client.

The water samples collected and analyzed are only reflective of conditions at the time of this sampling event for the date of this report and these parameters can vary rapidly over time, depending upon a number of conditions, including site-specific construction and environmental factors. As such, the sampling and results associated with this assessment is intended only as a description of available information at the dates and locations given. This report has been prepared in accordance with generally accepted environmental practices. Our conclusions and findings are based, in part, upon information provided to us by others and our site observations. We have not verified the completeness or accuracy of the information provided by others.

Our recommendations are in part based on federal, state, and local regulations and guidelines. ECS does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies, any conditions at the site that may present a potential danger to public health, safety, or the environment. Under this scope of services, ECS assumes no responsibility regarding any response actions initiated as a result of these findings. General compliance with regulations and response actions are the sole responsibility of the Client and should be conducted in accordance with local, state, and/or federal requirements.

Appendix I: Sample Location Sketch



Elevated Lead

Elevated Copper

Elevated Lead & Copper

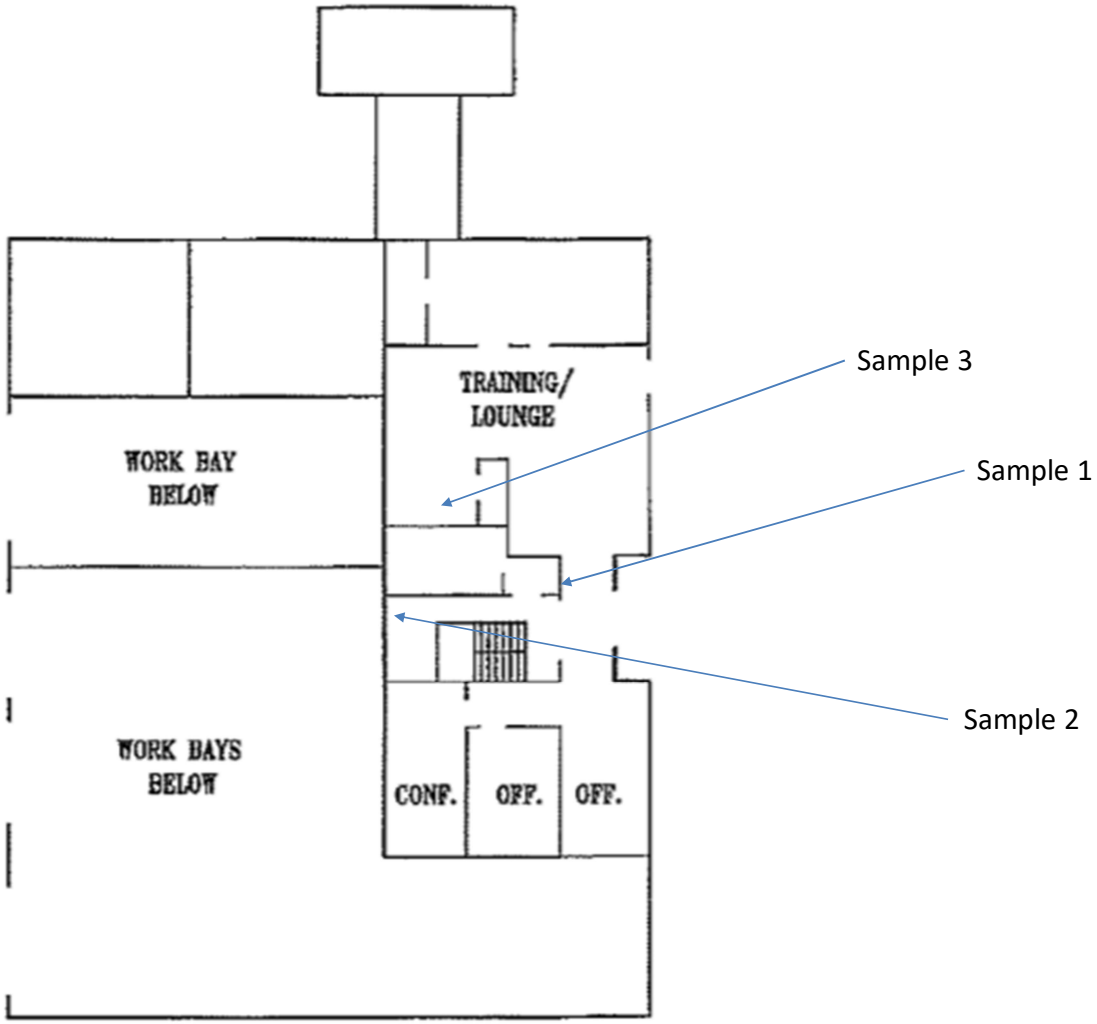
Transportation Facility
3540 Wheeler Avenue
Alexandria, VA 22304

Sample Location Sketch
First Floor

Scale: NTS

Project No.
47:11652-E

Site Visit:
06/07/2021



LEVEL TWO

Elevated Lead

Elevated Copper

Elevated Lead & Copper

Transportation Facility
3540 Wheeler Avenue
Alexandria, VA 22304

Sample Location Sketch Second Floor

Scale: NTS

Project No.
47:11652-E

Site Visit:
06/07/2021

Appendix II: Lead and Copper Drinking Water Sample Results

Transportation Facility Copper and Lead Drinking Water Results Table		
Sample Number	**Copper Result (mg/L)**	**Lead Result (mg/L)**
11653-E ACPS DW YR 1-01-1ST FI WF	0.346	<0.001
11653-E ACPS DW YR 1-02-1ST FI MENS SINK	0.085	<0.001
11653-E ACPS DW YR 1-03-1ST FI KITCHEN	0.069	<0.001
11653-E ACPS DW YR 1-04-LL WF HALL	0.244	<0.001
11653-E ACPS DW YR 1-05-LL SHOP WF	0.530	<0.001
The EPA's Lead and Copper Rule set an action level of 0.015 mg/L for lead and an action level of 1.3 mg/L for copper. Note these levels are related to public water systems (PWSs). The Code of Virginia requires school boards notify parents if testing results exceed 0.01 mg/L of Lead (Pb).		

Table Notes:
Red = Above the Action Level
Orange = Above 0.010 mg/L and below 0.015 mg/L

Appendix III: Lead and Copper Laboratory Analytical Results

Maryland spectral Services

Analytical Chemistry Services

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

15 June 2021

Michael Hamill
ECS-Chantilly
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151
RE: ACPS WATER SAMPLING

Enclosed are the results of analyses for samples received by the laboratory on 06/07/21 13:43.

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,

Will Brewington
President

Maryland spectral Services

Analytical Chemistry Services

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

Analytical Results

Project: ACPS WATER SAMPLING

Project Number: 47:11653-E
Project Manager: Michael Hamill

Reported:
06/15/21 12:33

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
11653-E ACPS DW YR 1-01-1		1060705-01	Drinking Water	06/07/21 00:00	06/07/21 13:43
11653-E ACPS DW YR 1-02-1		1060705-02	Drinking Water	06/07/21 00:00	06/07/21 13:43
11653-E ACPS DW YR 1-03-1		1060705-03	Drinking Water	06/07/21 00:00	06/07/21 13:43
11653-E ACPS DW YR 1-04-L		1060705-04	Drinking Water	06/07/21 00:00	06/07/21 13:43
11653-E ACPS DW YR 1-05-L		1060705-05	Drinking Water	06/07/21 00:00	06/07/21 13:43

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.

Will Brewington, President

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

Maryland spectral Services

Analytical Chemistry Services

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

Analytical Results

Project: ACPS WATER SAMPLING

Project Number: 47:11653-E
Project Manager: Michael Hamill

Reported:
06/15/21 12:33

11653-E ACPS DW YR 1-01-1ST FI WF

1060705-01 (Drinking Water)
Sample Date: 06/07/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Total Metals Analysis by EPA 200.8DW Prepared by 200.8-No Digestion Metals									
Copper	**346**		ug/L	1.00	1.00	1	06/11/21	06/11/21 14:44	CWK
Lead	ND		ug/L	1.00	1.00	1	06/11/21	06/11/21 14:44	CWK

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Will Brewington, President

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Maryland spectral Services

Analytical Chemistry Services

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

Analytical Results

Project: ACPS WATER SAMPLING

Project Number: 47:11653-E
Project Manager: Michael Hamill

Reported:
06/15/21 12:33

11653-E ACPS DW YR 1-02-1ST FI MENS SINK

1060705-02 (Drinking Water)
Sample Date: 06/07/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Total Metals Analysis by EPA 200.8DW Prepared by 200.8-No Digestion Metals									
Copper	**85.3**		ug/L	1.00	1.00	1	06/11/21	06/11/21 14:47	CWK
Lead	ND		ug/L	1.00	1.00	1	06/11/21	06/11/21 14:47	CWK

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Will Brewington, President

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Maryland spectral Services

Analytical Chemistry Services

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

Analytical Results

Project: ACPS WATER SAMPLING

Project Number: 47:11653-E
Project Manager: Michael Hamill

Reported:
06/15/21 12:33

11653-E ACPS DW YR 1-03-1ST FI KITCHEN

1060705-03 (Drinking Water)
Sample Date: 06/07/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Total Metals Analysis by EPA 200.8DW Prepared by 200.8-No Digestion Metals									
Copper	**68.6**		ug/L	1.00	1.00	1	06/11/21	06/11/21 14:49	CWK
Lead	ND		ug/L	1.00	1.00	1	06/11/21	06/11/21 14:49	CWK

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Will Brewington, President

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Maryland spectral Services

Analytical Chemistry Services

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

Analytical Results

Project: ACPS WATER SAMPLING

Project Number: 47:11653-E
Project Manager: Michael Hamill

Reported:
06/15/21 12:33

11653-E ACPS DW YR 1-04-LL WF HALL

1060705-04 (Drinking Water)
Sample Date: 06/07/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Total Metals Analysis by EPA 200.8DW Prepared by 200.8-No Digestion Metals									
Copper	**244**		ug/L	1.00	1.00	1	06/11/21	06/11/21 15:06	CWK
Lead	ND		ug/L	1.00	1.00	1	06/11/21	06/11/21 15:06	CWK

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Will Brewington, President

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Maryland spectral Services

Analytical Chemistry Services

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Baltimore MD 21227
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Analytical Results

Project: ACPS WATER SAMPLING

Project Number: 47:11653-E
Project Manager: Michael Hamill

Reported:
06/15/21 12:33

11653-E ACPS DW YR 1-05-LL SHOP WF

1060705-05 (Drinking Water)
Sample Date: 06/07/21

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Total Metals Analysis by EPA 200.8DW Prepared by 200.8-No Digestion Metals									
Copper	**530**		ug/L	1.00	1.00	1	06/11/21	06/11/21 15:09	CWK
Lead	ND		ug/L	1.00	1.00	1	06/11/21	06/11/21 15:09	CWK

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Will Brewington, President

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

Analytical Results

Project: ACPS WATER SAMPLING

Project Number: 47:11653-E
Project Manager: Michael Hamill

Reported:
06/15/21 12:33

Notes and Definitions

QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
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

Will Brewington, President

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

Company Name: ECS Mid-Atlantic	Project Manager: Michael Hamill
Project Name: ACPS Water Sampling	Project ID: 47:11653-E
Sampler(s): MPH/CGB	P.O. Number: 47:11653-E

CHAIN-OF-CUSTODY RECORD

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410-247-7600 • Fax 410-247-7602
reporting@mdspectral.com

Matrix Codes: NW (non-potable water), DW (drinking water)

Field Sample ID	Date	Time	DW	Water	Soil	Other	No. of Containers	LEAD (200-8DW-Pb)	Copper (200-8DU-Cu)	Preservative	Field Notes	MSS Lab ID
11653-E ACPS DW YR 1 -01-1st Fl WF	06/07/21			X			1	X	X	HNO3		1060705-01
11653-E ACPS DW YR 1 -02 -1st Fl Mens Sink	06/07/21			X			1	X	X	HNO3		-02
11653-E ACPS DW YR 1 -03 – 1st Fl Kitchen	06/07/21			X			1	X	X	HNO3		-03
11653-E ACPS DW YR 1 -04-LL WF Hall	06/07/21			X			1	X	X	HNO3		-04
11653-E ACPS DW YR 1 -05 – LL Shop WF	06/07/21			X			1	X	X	HNO3		-05
	06/07/21											
	06/07/21											

Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date/Time	Received by: *(Signature)*
(Printed) Catey Bourne	6/7/21	*(Printed)*	*(Printed)*		*(Printed)*
Relinquished by: *(Signature)*	Date/Time 13:43 6-7-21	Received by Lab: *(Signature)* *(Printed)* Lori Fosko			

Turn Around Time:
- ☑ Normal (7 day)
- ☐ 5 day
- ☐ 4 day
- ☐ 3 day
- ☐ Rush (2 day)
- ☐ Next Day
- ☐ Other: _____
- ☐ Specific Due Date: _____

Lab Use:
Temp: 25.2 °C
- ☐ Received on Ice
- ☑ Received same day

Delivery Method:
- ☐ Courier
- ☐ Client
- ☐ UPS
- ☐ FedEx
- ☐ USPS
- ☐ Other: _____

Special Instructions/QC Requirements & Comments:

Sample Disposal:
- ☐ Return to Client
- ☐ Disposal by lab
- ☐ Archive for _____ days

Appendix IV: List of Previous Reports

List of Previous Reports:

- 47:1519-K APCS Transportation Facility Lead and Copper Drinking Water Sampling Report dated January 29, 2020