

LIMITED LEAD AND COPPER DRINKING WATER JUNE 2021 SAMPLING EVENT



ACPS CHANGE FOR CHANGE ACADEMY

216 S PEYTON STREET
ALEXANDRIA, VIRGINIA 22314

ECS PROJECT NO. 47:11652-E

FOR: ALEXANDRIA CITY PUBLIC SCHOOLS

JULY 19, 2021





July 19, 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 Change for Change Academy, 216 S Peyton Street, 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 Change for Change Academy located at 216 S Peyton Street 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
jturner@ecslimited.com
703-471-8400

Michael Hamill, CIH
Senior Project Manager
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703-471-8400

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1.0 SITE DESCRIPTION

The ACPS Charles Barrett Elementary School is a two-story school building located at 216 Peyton Street 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 Chance for Change Academy in December 2019. The purpose of this water sampling event was to perform periodic testing of the school 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

The water samples collected from the bubblers outside the bathrooms on the 1st and 2nd floors were reported to have a concentration of copper 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 water samples collected from the bubblers outside the bathrooms on the 1st and 2nd floors were reported to have a concentration of copper above the EPA copper action level of 1.3 mg/L (PPM). The other samples collected from the building were reported below the action level. The EPA's 3Ts document recommends that if initial testing results are reported above the action level, follow-up flush sampling should be performed to determine if the contamination is from the fixture or interior plumbing components.

ECS recommends follow-up flush testing be performed for the water outlet which was reported to have concentrations above the EPA copper action level of 1.3 mg/L (PPM) as described above or long term remediation actions should be implemented. For remediation actions, a group of professionals, including school administrators, plumbers, maintenance staff, and industrial hygienist, should be consulted.

Pending the result of the follow up testing, ECS recommends the following immediate steps:

- The water outlet that was reported to have an elevated level should be shut-off until additional remediation steps are established;
- A placard should be posted on the elevated outlet with a notice that water should not be consumed or used for cooking. The placard should use pictures if there are small children using the building; and,
- Consult the plumbing staff, facilities staff, and EPA's 3Ts document to determine whether short term control measures should be implemented prior to the receiving the follow-up flush sampling result.

In addition to the remediation efforts for the elevated outlets, ECS recommends periodic follow-up screening be performed for the building. The EPA does not specify a specific time frame for which follow-up testing for schools needs to be performed. The EPA suggest 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

Chance for Change Academy
216 S Peyton Street
Alexandria, VA 22314

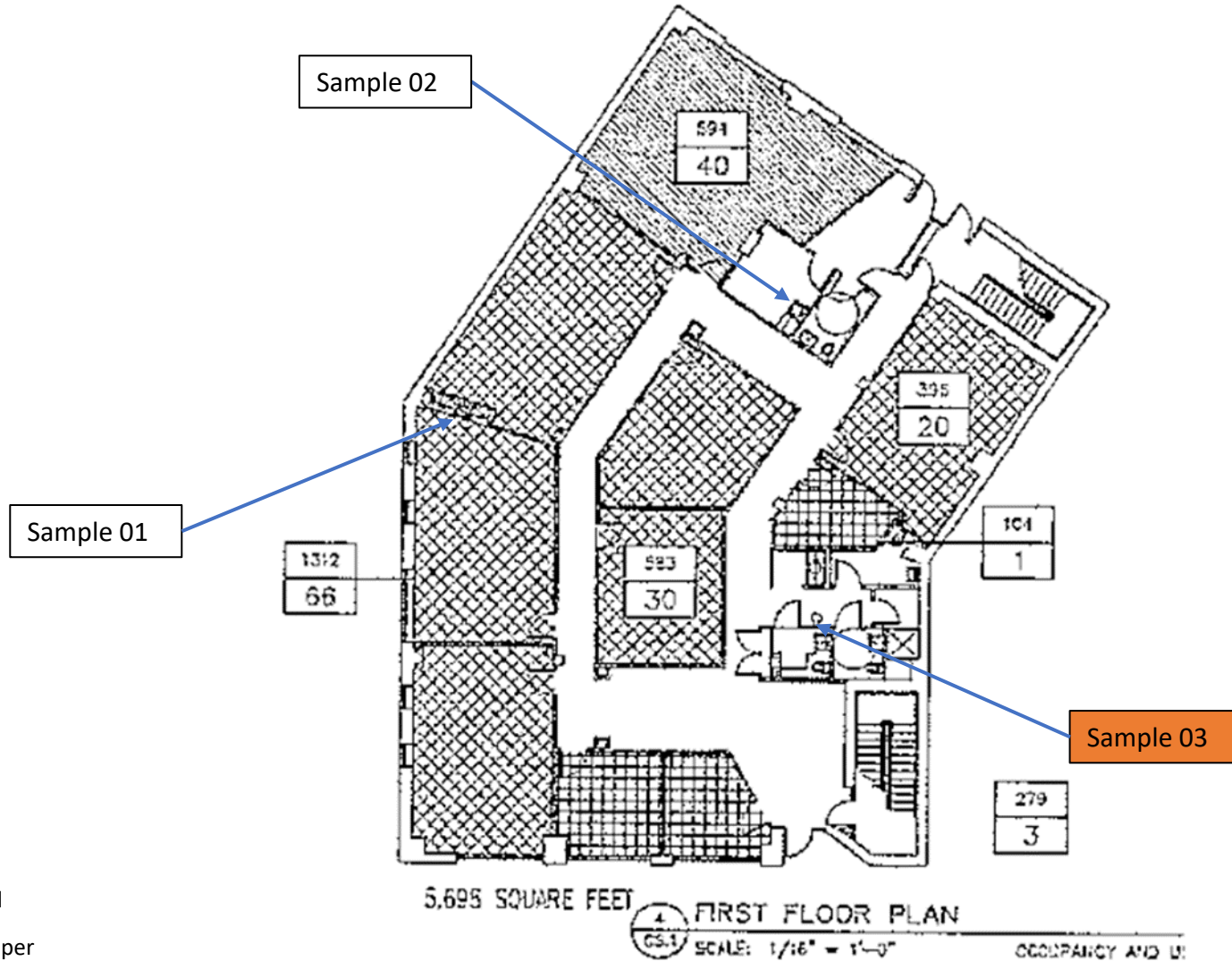


**Sample Location
Sketch
First Floor**

Scale: NTS

Project No.
47:11652-E

Site Visit:
06/15/21



- Elevated Lead
- Elevated Copper
- Elevated Lead & Copper
- Notifiable Lead Concentration

Chance for Change Academy
216 S Peyton Street
Alexandria, VA 22314

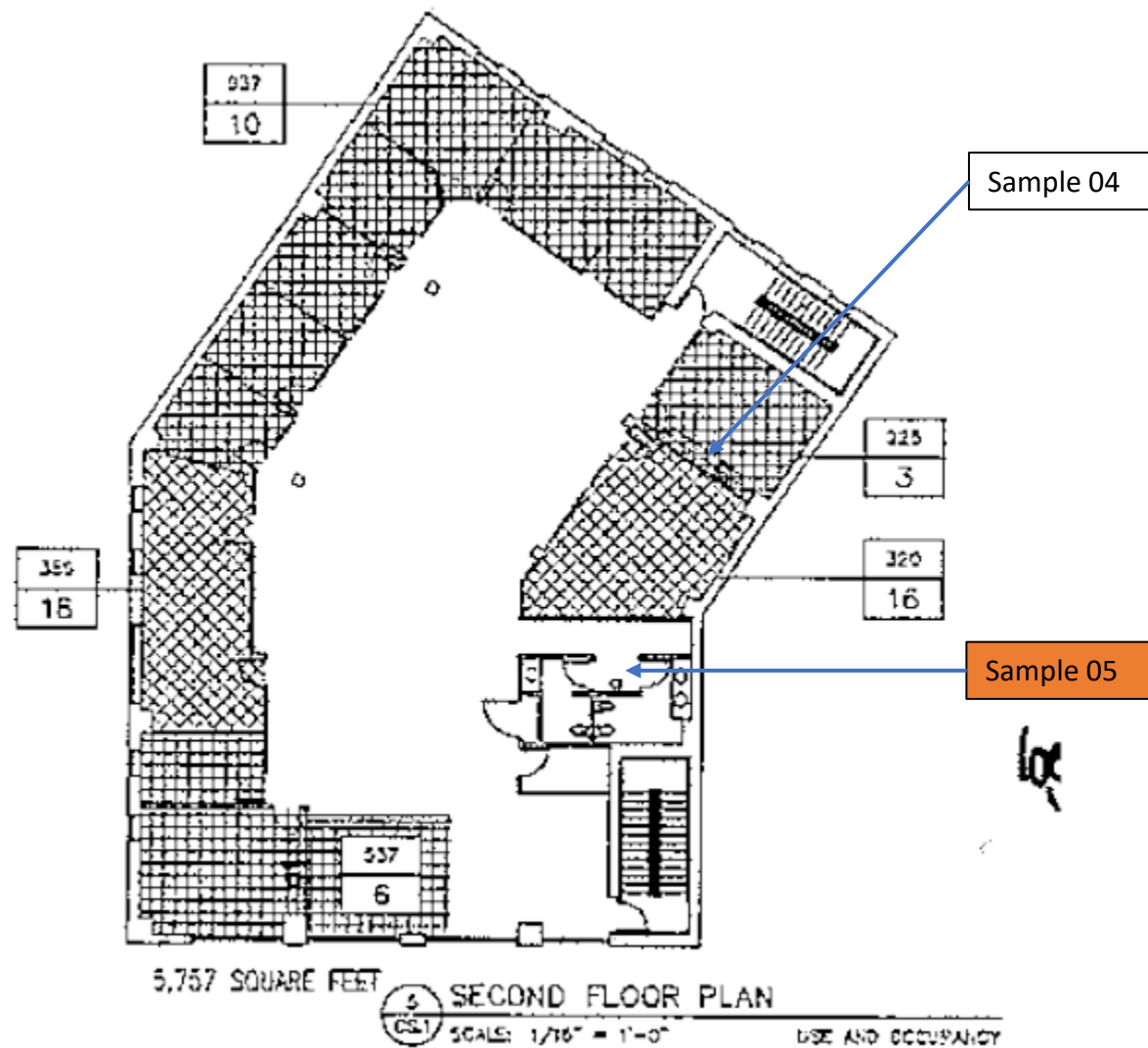


Sample Location
Sketch
Second Floor

Scale: NTS

Project No.
47:11652-E

Site Visit:
06/15/21



- Elevated Lead
- Elevated Copper
- Elevated Lead & Copper
- Notifiable Lead Concentration

Appendix II: Lead and Copper Drinking Water Sample Results



Charles Barrett Elementary School Copper and Lead Drinking Water Results Table		
Sample Number	Copper Result (mg/L)	Lead Result (mg/L)
061521CC-01-1145	0.412	0.003
061521CC-02-1115	0.152	<0.001
061521CC-03-BUBBLER BY BATH RMS 1ST	1.600	<0.001
061521CC-04-2085	0.125	<0.001
061521CC-05-BUBBLER BY BATH RMS 2ND	3.980	<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

23 June 2021

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

Enclosed are the results of analyses for samples received by the laboratory on 06/15/21 14:39.

Please visit our website at www.mdspectral.com for a complete listing of our 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
MD DW LabID 153

Project: ACPS-CC

Project Number: 47:11652-E
Project Manager: Michael Hamill

Reported:
06/23/21 10:34

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
061521CC-01-1145		1061520-01	Drinking Water	06/15/21 06:29	06/15/21 14:39
061521CC-02-1115		1061520-02	Drinking Water	06/15/21 06:33	06/15/21 14:39
061521CC-03-BUBBLER BY BA		1061520-03	Drinking Water	06/15/21 06:35	06/15/21 14:39
061521CC-04-2085		1061520-04	Drinking Water	06/15/21 06:36	06/15/21 14:39
061521CC-05-BUBBLER BY BA		1061520-05	Drinking Water	06/15/21 06:37	06/15/21 14:39



Rabecka Koons, Quality Assurance Officer

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.

1500 Caton Center Dr Suite G
 Baltimore MD 21227
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 www.mdspectral.com
 MD DW LabID 153

Project: ACPS-CC

Project Number: 47:11652-E
 Project Manager: Michael Hamill

Reported:
 06/23/21 10:34

061521CC-01-1145

1061520-01 (Drinking Water)
Sample Date: 06/15/21

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	412		ug/L	1.00	1.00	1	06/21/21	06/21/21 23:19	VVD
Lead	2.77		ug/L	1.00	1.00	1	06/21/21	06/21/21 23:19	VVD



Rabecka Koons, Quality Assurance Officer

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Project: ACPS-CC

Project Number: 47:11652-E
 Project Manager: Michael Hamill

Reported:
 06/23/21 10:34

061521CC-02-1115

1061520-02 (Drinking Water)
Sample Date: 06/15/21

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	152		ug/L	1.00	1.00	1	06/21/21	06/21/21 23:26	VVD
Lead	ND		ug/L	1.00	1.00	1	06/21/21	06/21/21 23:26	VVD



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Rabecka Koons, Quality Assurance Officer

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 MD DW LabID 153

Project: ACPS-CC

Project Number: 47:11652-E
 Project Manager: Michael Hamill

Reported:
 06/23/21 10:34

061521CC-03-BUBBLER BY BATH RMS 1ST

1061520-03 (Drinking Water)
Sample Date: 06/15/21

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	1600		ug/L	10.0	10.0	10	06/21/21	06/22/21 18:11	VVD
Lead	ND		ug/L	1.00	1.00	1	06/21/21	06/21/21 23:28	VVD



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Rabecka Koons, Quality Assurance Officer

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 www.mdspectral.com
 MD DW LabID 153

Project: ACPS-CC

Project Number: 47:11652-E
 Project Manager: Michael Hamill

Reported:
 06/23/21 10:34

061521CC-04-2085

1061520-04 (Drinking Water)
Sample Date: 06/15/21

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	125		ug/L	1.00	1.00	1	06/21/21	06/21/21 23:31	VVD
Lead	ND		ug/L	1.00	1.00	1	06/21/21	06/21/21 23:31	VVD



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Project: ACPS-CC

Project Number: 47:11652-E
 Project Manager: Michael Hamill

Reported:
 06/23/21 10:34

061521CC-05-BUBBLER BY BATH RMS 2ND

1061520-05 (Drinking Water)
Sample Date: 06/15/21

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	3980		ug/L	10.0	10.0	10	06/21/21	06/22/21 18:14	VVD
Lead	ND		ug/L	1.00	1.00	1	06/21/21	06/21/21 23:33	VVD



Rabecka Koons, Quality Assurance Officer

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Project: ACPS-CC

Project Number: 47:11652-E
Project Manager: Michael Hamill

Reported:
06/23/21 10:34

Total Metals Analysis by EPA 200.8DW - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B106366 - 200.8-No Digestion Metals										
Blank (B106366-BLK1)					Prepared & Analyzed: 06/21/21					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
Blank (B106366-BLK2)					Prepared & Analyzed: 06/21/21					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
Blank (B106366-BLK3)					Prepared & Analyzed: 06/21/21					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
Blank (B106366-BLK4)					Prepared & Analyzed: 06/21/21					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
Blank (B106366-BLK5)					Prepared & Analyzed: 06/21/21					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
Blank (B106366-BLK6)					Prepared & Analyzed: 06/21/21					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
Blank (B106366-BLK7)					Prepared & Analyzed: 06/21/21					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
Blank (B106366-BLK8)					Prepared: 06/21/21 Analyzed: 06/22/21					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						



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Project: ACPS-CC

Project Number: 47:11652-E
Project Manager: Michael Hamill

Reported:
06/23/21 10:34

Total Metals Analysis by EPA 200.8DW - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B106366 - 200.8-No Digestion Metals										
Blank (B106366-BLK9)					Prepared: 06/21/21 Analyzed: 06/22/21					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
Blank (B106366-BLKA)					Prepared: 06/21/21 Analyzed: 06/22/21					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
Blank (B106366-BLKB)					Prepared: 06/21/21 Analyzed: 06/22/21					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
LCS (B106366-BS1)					Prepared & Analyzed: 06/21/21					
Copper	10.1		1.00	ug/L	10.0		101	80-120		
Lead	9.27		1.00	ug/L	10.0		93	80-120		
LCS (B106366-BS2)					Prepared & Analyzed: 06/21/21					
Copper	10.2		1.00	ug/L	10.0		102	80-120		
Lead	9.46		1.00	ug/L	10.0		95	80-120		
LCS (B106366-BS3)					Prepared & Analyzed: 06/21/21					
Copper	10.4		1.00	ug/L	10.0		104	80-120		
Lead	9.49		1.00	ug/L	10.0		95	80-120		
LCS (B106366-BS4)					Prepared & Analyzed: 06/21/21					
Copper	10.1		1.00	ug/L	10.0		101	80-120		
Lead	9.40		1.00	ug/L	10.0		94	80-120		
LCS (B106366-BS5)					Prepared & Analyzed: 06/21/21					
Copper	9.45		1.00	ug/L	10.0		95	80-120		
Lead	8.77		1.00	ug/L	10.0		88	80-120		



Rabecka Koons, Quality Assurance Officer

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Project: ACPS-CC

Project Number: 47:11652-E
Project Manager: Michael Hamill

Reported:
06/23/21 10:34

Total Metals Analysis by EPA 200.8DW - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B106366 - 200.8-No Digestion Metals										
LCS (B106366-BS6)					Prepared & Analyzed: 06/21/21					
Copper	10.5		1.00	ug/L	10.0		105	80-120		
Lead	9.61		1.00	ug/L	10.0		96	80-120		
LCS (B106366-BS7)					Prepared & Analyzed: 06/21/21					
Copper	9.37		1.00	ug/L	10.0		94	80-120		
Lead	8.74		1.00	ug/L	10.0		87	80-120		
LCS (B106366-BS8)					Prepared: 06/21/21 Analyzed: 06/22/21					
Copper	10.1		1.00	ug/L	10.0		101	80-120		
Lead	9.50		1.00	ug/L	10.0		95	80-120		
LCS (B106366-BS9)					Prepared: 06/21/21 Analyzed: 06/22/21					
Copper	9.94		1.00	ug/L	10.0		99	80-120		
Lead	9.21		1.00	ug/L	10.0		92	80-120		
LCS (B106366-BSA)					Prepared: 06/21/21 Analyzed: 06/22/21					
Copper	10.0		1.00	ug/L	10.0		100	80-120		
Lead	9.38		1.00	ug/L	10.0		94	80-120		
LCS (B106366-BSB)					Prepared: 06/21/21 Analyzed: 06/22/21					
Copper	9.94		1.00	ug/L	10.0		99	80-120		
Lead	9.52		1.00	ug/L	10.0		95	80-120		
Duplicate (B106366-DUP1)			Source: 1061413-01			Prepared & Analyzed: 06/21/21				
Copper	280		1.00	ug/L		282			0.5	20
Lead	1.17		1.00	ug/L		1.05			11	20
Duplicate (B106366-DUP2)			Source: 1061413-20			Prepared & Analyzed: 06/21/21				
Copper	599		1.00	ug/L		602			0.5	20
Lead	2.56		1.00	ug/L		2.55			0.5	20

Rabecka Koons

Rabecka Koons, Quality Assurance Officer

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.

Project: ACPS-CC

Project Number: 47:11652-E
Project Manager: Michael Hamill

Reported:
06/23/21 10:34

Total Metals Analysis by EPA 200.8DW - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B106366 - 200.8-No Digestion Metals										
Duplicate (B106366-DUP3)			Source: 1061414-01			Prepared & Analyzed: 06/21/21				
Copper	74.2		1.00	ug/L		74.6			0.5	20
Lead	ND		1.00	ug/L		ND				20
Duplicate (B106366-DUP4)			Source: 1061519-02			Prepared & Analyzed: 06/21/21				
Copper	949		1.00	ug/L		941			0.8	20
Lead	2.44		1.00	ug/L		2.44			0.09	20
Duplicate (B106366-DUP5)			Source: 1061520-01			Prepared & Analyzed: 06/21/21				
Copper	411		1.00	ug/L		412			0.2	20
Lead	2.74		1.00	ug/L		2.77			1	20
Duplicate (B106366-DUP6)			Source: 1061603-01			Prepared & Analyzed: 06/21/21				
Copper	30.4		1.00	ug/L		30.5			0.4	20
Lead	2.03		1.00	ug/L		2.01			0.8	20
Duplicate (B106366-DUP7)			Source: 1061622-01			Prepared & Analyzed: 06/21/21				
Copper	102		1.00	ug/L		103			0.8	20
Lead	ND		1.00	ug/L		ND				20
Duplicate (B106366-DUP8)			Source: 1061622-20			Prepared: 06/21/21 Analyzed: 06/22/21				
Copper	144		1.00	ug/L		146			0.9	20
Lead	ND		1.00	ug/L		ND				20
Duplicate (B106366-DUP9)			Source: 1061622-42			Prepared: 06/21/21 Analyzed: 06/22/21				
Copper	128		1.00	ug/L		130			2	20
Lead	ND		1.00	ug/L		ND				20
Duplicate (B106366-DUPA)			Source: 1061622-60			Prepared: 06/21/21 Analyzed: 06/22/21				
Copper	190		1.00	ug/L		185			3	20
Lead	ND		1.00	ug/L		ND				20



Rabecka Koons, Quality Assurance Officer

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Project: ACPS-CC

Project Number: 47:11652-E
Project Manager: Michael Hamill

Reported:
06/23/21 10:34

Total Metals Analysis by EPA 200.8DW - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B106366 - 200.8-No Digestion Metals										
Duplicate (B106366-DUPB)			Source: 1061804-01		Prepared: 06/21/21 Analyzed: 06/22/21					
Copper	17.2		1.00	ug/L		17.4			1	20
Lead	ND		1.00	ug/L		1.22				20
Matrix Spike (B106366-MS1)			Source: 1061413-01		Prepared & Analyzed: 06/21/21					
Copper	285	QM-4X	1.00	ug/L	10.0	282	34	80-120		
Lead	10.9		1.00	ug/L	10.0	1.05	98	80-120		
Matrix Spike (B106366-MS2)			Source: 1061413-20		Prepared & Analyzed: 06/21/21					
Copper	592	QM-4X	1.00	ug/L	10.0	602	NR	80-120		
Lead	12.1		1.00	ug/L	10.0	2.55	96	80-120		
Matrix Spike (B106366-MS3)			Source: 1061414-01		Prepared & Analyzed: 06/21/21					
Copper	82.7		1.00	ug/L	10.0	74.6	81	80-120		
Lead	10.8		1.00	ug/L	10.0	ND	108	80-120		
Matrix Spike (B106366-MS4)			Source: 1061519-02		Prepared & Analyzed: 06/21/21					
Copper	923	QM-4X	1.00	ug/L	10.0	941	NR	80-120		
Lead	11.9		1.00	ug/L	10.0	2.44	94	80-120		
Matrix Spike (B106366-MS5)			Source: 1061520-01		Prepared & Analyzed: 06/21/21					
Copper	407	QM-4X	1.00	ug/L	10.0	412	NR	80-120		
Lead	11.5		1.00	ug/L	10.0	2.77	87	80-120		
Matrix Spike (B106366-MS6)			Source: 1061603-01		Prepared & Analyzed: 06/21/21					
Copper	39.0		1.00	ug/L	10.0	30.5	85	80-120		
Lead	11.6		1.00	ug/L	10.0	2.01	96	80-120		
Matrix Spike (B106366-MS7)			Source: 1061622-01		Prepared: 06/21/21 Analyzed: 06/22/21					
Copper	110	QM-4X	1.00	ug/L	10.0	103	72	80-120		
Lead	9.68		1.00	ug/L	10.0	ND	97	80-120		



Rabecka Koons, Quality Assurance Officer

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Project: ACPS-CC

Project Number: 47:11652-E
Project Manager: Michael Hamill

Reported:
06/23/21 10:34

Total Metals Analysis by EPA 200.8DW - Quality Control

Analyte	Result	Notes	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B106366 - 200.8-No Digestion Metals

Matrix Spike (B106366-MS8)		Source: 1061622-20		Prepared: 06/21/21		Analyzed: 06/22/21		
Copper	152	QM-4X	1.00	ug/L	10.0	146	62	80-120
Lead	10.0		1.00	ug/L	10.0	ND	100	80-120
Matrix Spike (B106366-MS9)		Source: 1061622-42		Prepared: 06/21/21		Analyzed: 06/22/21		
Copper	135	QM-4X	1.00	ug/L	10.0	130	49	80-120
Lead	10.0		1.00	ug/L	10.0	ND	100	80-120
Matrix Spike (B106366-MSA)		Source: 1061622-60		Prepared: 06/21/21		Analyzed: 06/22/21		
Copper	198	QM-4X	1.00	ug/L	10.0	185	125	80-120
Lead	8.97		1.00	ug/L	10.0	ND	90	80-120
Matrix Spike (B106366-MSB)		Source: 1061804-01		Prepared: 06/21/21		Analyzed: 06/22/21		
Copper	26.6		1.00	ug/L	10.0	17.4	92	80-120
Lead	4.62	QM-07	1.00	ug/L	10.0	1.22	34	80-120



Rabecka Koons, Quality Assurance Officer

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Project: ACPS-CC

Project Number: 47:11652-E
Project Manager: Michael Hamill

Reported:
06/23/21 10:34

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.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- 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



Rabecka Koons, Quality Assurance Officer

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.

Company Name: ECS Mid-Atlantic LLC 14026 Thunderbolt Place Suite 100 Chantilly VA 20151		Project Manager: Michael Hamill		Analysis Requested										CHAIN-OF-CUSTODY RECORD		
Project Name: ACPS Water Sampling		Project ID: 47:11652-E												Maryland Spectral Services, Inc. 1500 Caton Center Drive, Suite G Baltimore, MD 21227 410-247-7600 • Fax 410-247-7602 labman@mdspectral.com		
Sampler(s):		P.O. Number: 47:11652-E												Matrix Codes: NW (nonpotable water) PW (potable water)		
Field Sample ID		Date	Time											Water	Soil	Other
061521CC-01-1145		6-15	6:29	X			1	X	X	HNO ₃		1061520				
061521CC-02-1115		6-15	6:33	X			1	X	X	HNO ₃		-02				
061521CC-03- ^{Bubbler 1st} by Bette RM		6-15	6:35	X			1	X	X	HNO ₃		-03				
061521CC-04-2085		6-15	6:36	X			1	X	X	HNO ₃		-04				
061521CC-05- ^{Bubbler 2nd} by Bette RM		6-15	6:37	X			1	X	X	HNO ₃		-05				
Relinquished by: (Signature) <i>[Signature]</i>		Date/Time 6/15		Received by: (Signature)				Relinquished by: (Signature)				Date/Time		Received by: (Signature)		
(Printed) Brittany [Signature]				(Printed)				(Printed)						(Printed)		
Relinquished by: (Signature)		Date/Time 14:39 6-15-21		Received by Lab: (Signature) <i>[Signature]</i>				Turn Around Time:				Lab Use:				
(Printed)				(Printed) Lorita Oster				<input type="checkbox"/> Normal (7 day) <input checked="" type="checkbox"/> 5 day <input type="checkbox"/> 4 day <input type="checkbox"/> 3 day <input type="checkbox"/> Rush (2 day) <input type="checkbox"/> Next Day <input type="checkbox"/> Other: _____ <input type="checkbox"/> Specific Due Date: _____				Temp: _____ °C 23.1 <input type="checkbox"/> Received on Ice <input type="checkbox"/> Received same day <input type="checkbox"/> Preservation Appropriate				
Delivery Method: <input checked="" type="checkbox"/> X Courier <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> USPS <input type="checkbox"/> Other: _____		Special Instructions/QC Requirements & Comments:										Sample Disposal: <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by lab <input type="checkbox"/> Archive for _____ days				

Appendix IV: List of Previous Reports

List of Previous Reports:

- [47:1519-K Chance for Change Academy Lead and Copper Drinking Water Sampling Report](#)
dated January 20, 2020