

ACPS CENTRAL OFFICE WATER SAMPLING JUNE 2022



ACPS CENTRAL OFFICE

1340 BRADDOCK PL.
ALEXANDRIA, VA 22314

ECS PROJECT NO. 47:11652-E

FOR: ALEXANDRIA CITY PUBLIC SCHOOLS

JUNE 26, 2022





June 26, 2022

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: ACPS Central Office Water Sampling June 2022, ACPS Central Office, 1340 Braddock Pl., Alexandria, VA

Dear Mr. Contreras:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Alexandria City Public Schools with the results of the water sampling performed at the ACPS Central Office located at 1340 Braddock Pl. in Alexandria, VA. 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

Lauren E. Kessler, CIH, CSP
Environmental Senior Project Manager
LKessler@ecslimited.com
703-471-8400

Christopher J. Chapman, CIH
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TABLE OF CONTENTS		PAGE
1.0	PROJECT DESCRIPTION	1
2.0	PURPOSE	1
3.0	METHODOLOGY	1
3.1	Lead and Copper in Drinking Water	1
4.0	RESULTS	2
4.1	Lead in Drinking Water	2
4.2	Copper in Drinking Water	2
5.0	RECOMMENDATIONS AND REGULATORY REQUIREMENTS	2
5.1	Lead in Drinking Water	3
5.2	Copper in Drinking Water	4
6.0	LIMITATIONS	5

TABLE OF APPENDICES

Appendix I: Drawings

Appendix II: Sample Table

Appendix III: Laboratory Report(s)

1.0 PROJECT DESCRIPTION

The ACPS Central Office is a seven-story school building located at 1340 Braddock Pl. in Alexandria, VA. The building is currently occupied, and is used by the Alexandria City Public Schools (ACPS) as an office facility. The site is located within Alexandria and is under the jurisdiction of the City of Alexandria, VA, federal Environmental Protection Agency (EPA), and Commonwealth of Virginia - Code of Regulations for drinking water.

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). Because the site is connected to a public water system, the site is not independently regulated as a water supplier by the EPA.

2.0 PURPOSE

The purpose of this water sampling event was provide periodic - proactive re-testing of select drinking water sources within the building. This was not a comprehensive sampling of all potable drinking water sources in the building.

US EPA created the Lead and Copper Rule under the Safe Drinking Water Act (SDWA). US EPA established a lead action level of 15 ppb (parts per billion) or 0.015 milligrams per liter (mg/L).

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 mg/L), 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 in drinking water but it does reference the action levels created for public water systems in the EPA's LCR. The results of this water sampling event will be compared to the action levels set in the EPA's LCR.

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 in Drinking Water

Sample protocols were performed following the guidance of the US EPA document, *3Ts for Reducing Lead in Drinking Water in Schools: Revised Technical Guidance (EPA 815-B-18-007)*. For each facility, water samples were collected from priority drinking water sources that were previously sampled and shown to have elevated levels of lead within the water.

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 eight hours prior to sampling. ACPS personnel granted ECS access to the building. ECS attempted to sample 20% of the accessible potable water sources within the building, with a minimum of five samples per building and a minimum of two samples per floor. 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 facility initials, a sequential number identifier, and sample location identifier.

The collected samples were sealed and transported by courier to Maryland Spectral Services located in Baltimore, Maryland under chain of custody protocol for analysis per EPA Methodology for lead in drinking water.

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

The sample collected from the 2nd floor kitchen/break room was reported to have concentrations above the VA lead action level of 0.010 mg/L (PPM). In total, fifteen (15) water samples were collected from the building. A table of the collected samples and the associated analytical results can be found in the appendices. Please note that the analytical results displayed in the table have been converted to mg/L (PPM) for easy reference. A sketch identifying the approximate location of each water sample can also be found in the appendices.

4.2 Copper in Drinking Water

The samples from the second floor and third floor kitchens/break rooms were reported to have concentrations above the EPA copper action level of 1.3 mg/L (PPM). In total, fifteen (15) water samples were collected from the building. A table of the collected samples and the associated analytical results can be found in the appendices. Please 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 ACPS Central Office Water Sampling June 2022, the results of laboratory analysis, and our findings and observations, ECS presents the following recommendations.

5.1 Lead in Drinking Water

The water sample collected from the right faucet of the kitchen/breakroom on the 2nd floor was reported to be above the Virginia lead action level in drinking water. The other water samples collected were reported below the EPA action level and Virginia's action level. The EPA's 3Ts document recommends choosing one of several short-term or permanent control measures. The following are the recommended short-term and permanent control measure options:

Short-Term Control Options:

- Mark the sink as hand wash only
- Provide Filters at Problem Taps - Point-of-use (POU) units are commercial available, can be relatively inexpensive, and quickly installed. The effectiveness of POU's can vary. POU's should be tested and certified against the NSF/ANSI Standard 53 (for lead removal) prior to installation. If POU's are installed, they should be incorporated into a routine maintenance plan;
- Flush Taps Prior to Use - Flushing individual outlets or all outlets may be used as a short term option; and,
- Provide Bottled Water - This control option is expensive and ECS does not recommend its use because of the relatively small number of elevated outlets.

Permanent Control Measures:

- Replacement of Problem Outlets - This option is recommended as a cost effective permanent control measure if there are only a few elevated outlets;
- Pipe Replacement;
- Provide Filters at Problem Taps: and,
- Reconfigure Plumbing.

After the implementation of a control option, ECS recommends follow-up sampling of the elevated outlets to evaluate effectiveness of the control option.

In addition to the remediation efforts for the elevated outlets, ECS recommends period 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.

No specific time frame is given in which follow-up testing for the schools needs to be performed. As good practice, ECS recommends performing follow-up periodic testing every three years. If additional guidelines or regulations are enacted at a state or federal level, the frequency of testing should be modified to reflect these changes.

In the US EPA 3Ts document, routine control measures are recommended as general good practice for over-all drinking water safety. The routine control measures that should be conducted to prevent exposure to elevated levels of lead, include the following:

- Clean debris from all accessible screens frequently. If you discovered sediments in faucet screens, have the sediments tested for lead and continue to clean your screens frequently, even if the analysis finds no lead.
- Use only cold water for food and beverage preparation. Hot water will dissolve lead more quickly than cold water and is likely to contain increased lead levels. If hot water is needed, it should be taken from the cold water tap and heated on a stove or in a microwave oven.
- Instruct the users (students and staff) to run the water before drinking or staff could run the water before students arrive, so they are drinking water that has not been in contact with the faucet interior since faucets are often a major source of lead in drinking water.
- Placard bathroom sinks with notices that water should not be consumed. You should use pictures if there are small children using bathrooms.
- US EPA recommends public notification of the findings of this sample event to the public and school staff. EPA has described different procedures for dissemination of this information which are described in Section III.6 of the 3 Ts document. The school should review the different methods described and choose the most appropriate method for the school.

5.2 Copper in Drinking Water

The water samples collected from the sinks of the second and third floor kitchens/break rooms were reported above 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 an industrial hygienist(s), should be consulted. Pending the result of the follow up testing, ECS recommends the following immediate steps:

- The water outlets that were reported to have an elevated level should be shut-off until additional remediation steps are established;
- A placard should be posted on the elevated outlets 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

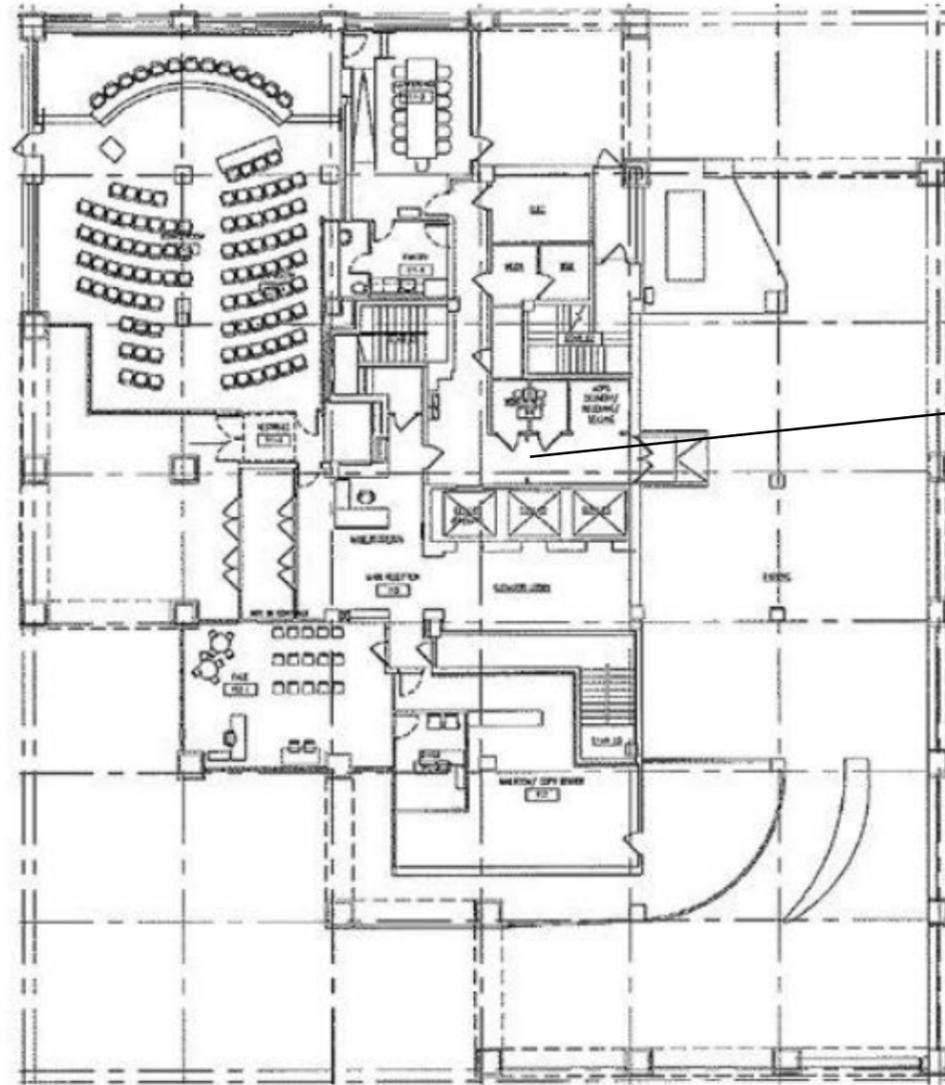
The conclusions and recommendations presented within this report are based upon a reasonable level of assessment within normal bounds and standards of professional practice for a site in this particular geographic setting. ECS is not responsible or liable for the discovery and elimination of hazards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

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: Drawings

1st Floor



COWF1

- Elevated Lead
- Elevated Copper
- Elevated Lead & Copper

Central Office
1340 Braddock Place
Alexandria, VA 22314



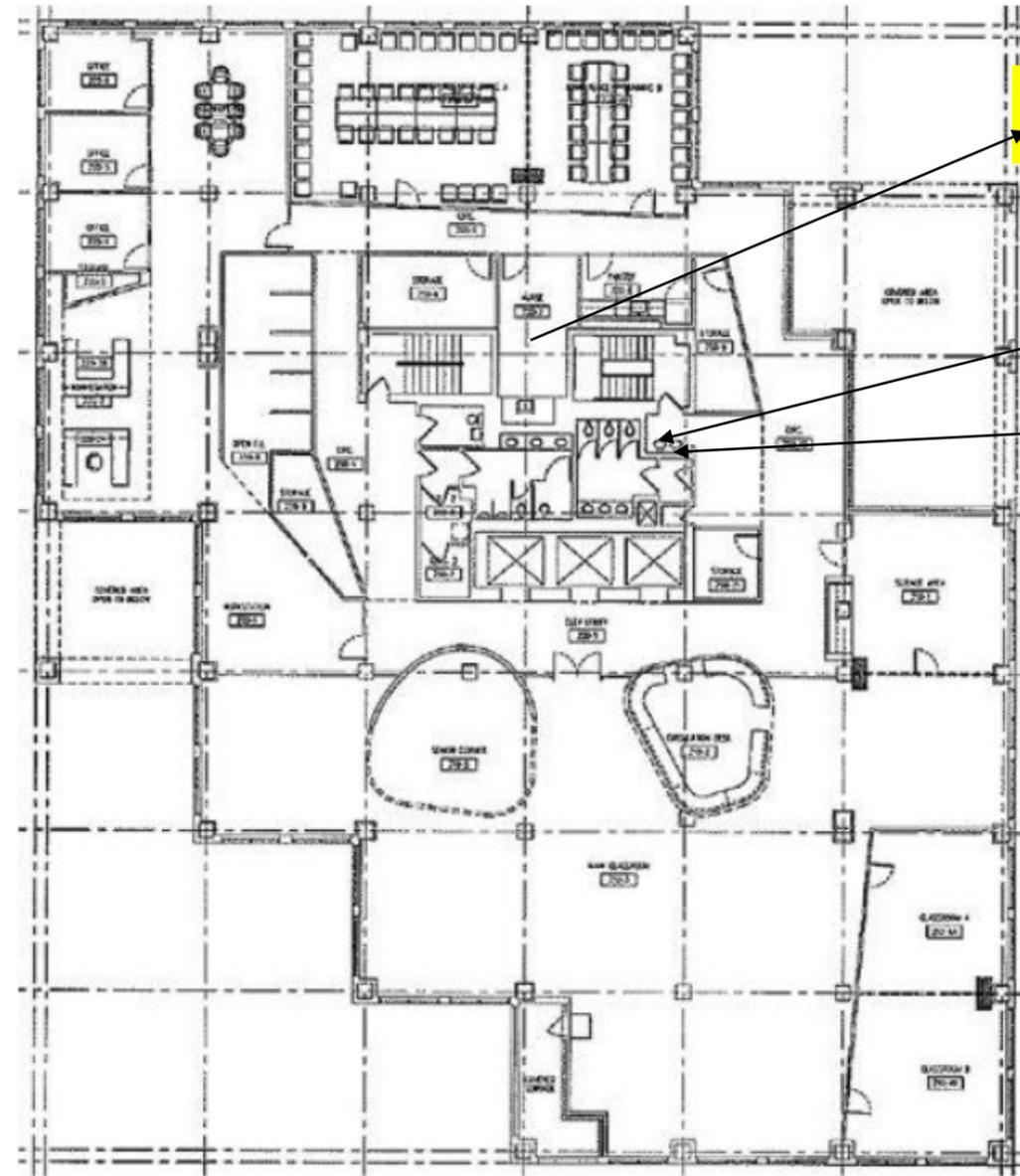
**Sample Location
Sketch**

Scale: NTS

Project No.
47:11652-E

Site Visit:
06/1/21

2nd Floor



CO200-7

COWF2R

COWF2L

- Elevated Lead
- Elevated Copper
- Elevated Lead & Copper

Central Office
1340 Braddock Place
Alexandria, VA 22314



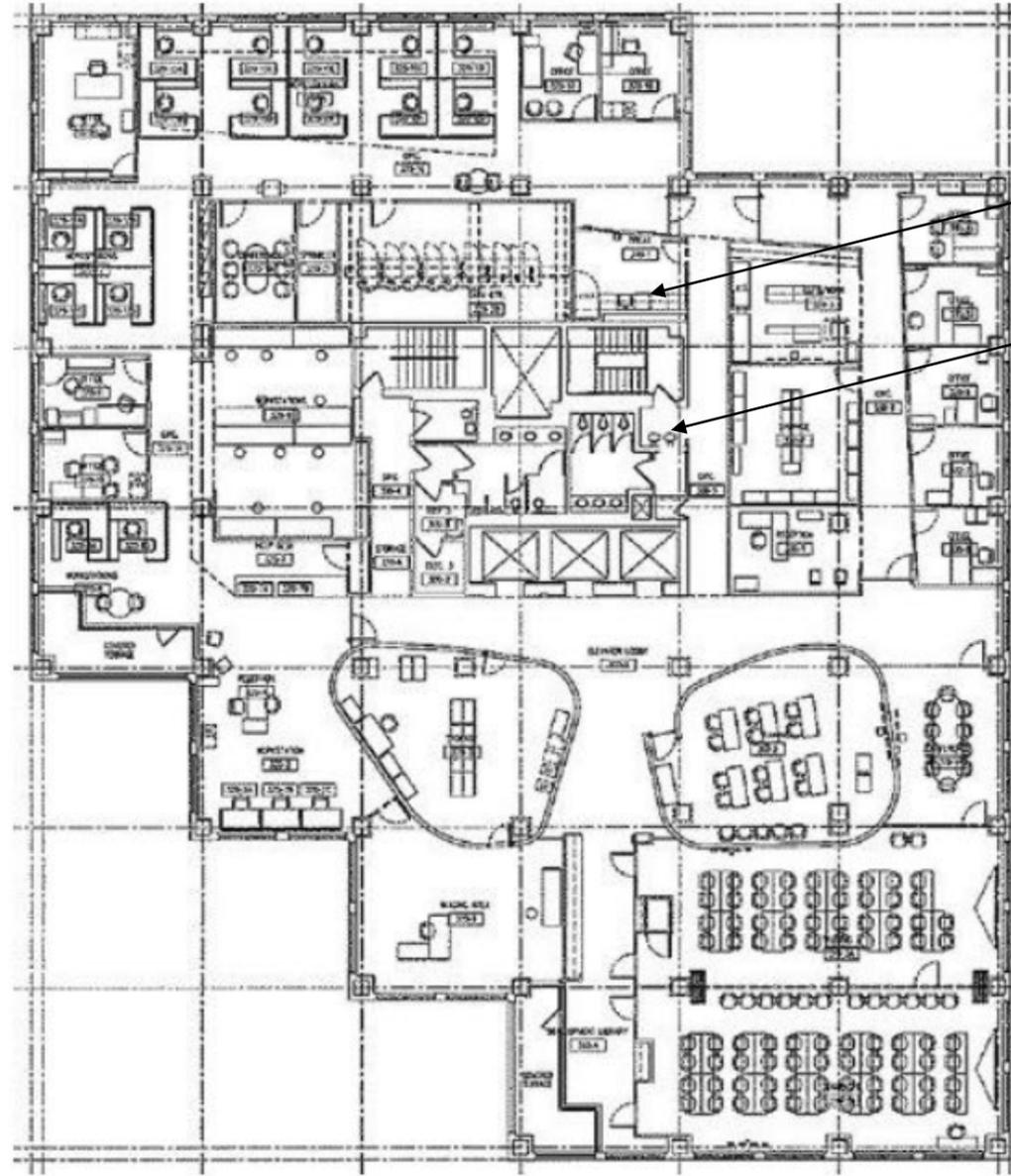
Sample Location Sketch

Scale: NTS

Project No.
47:11652-E

Site Visit:
06/1/21

3rd Floor



COP3S

COWF3B

- Elevated Lead
- Elevated Copper
- Elevated Lead & Copper

Central Office
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Alexandria, VA 22314



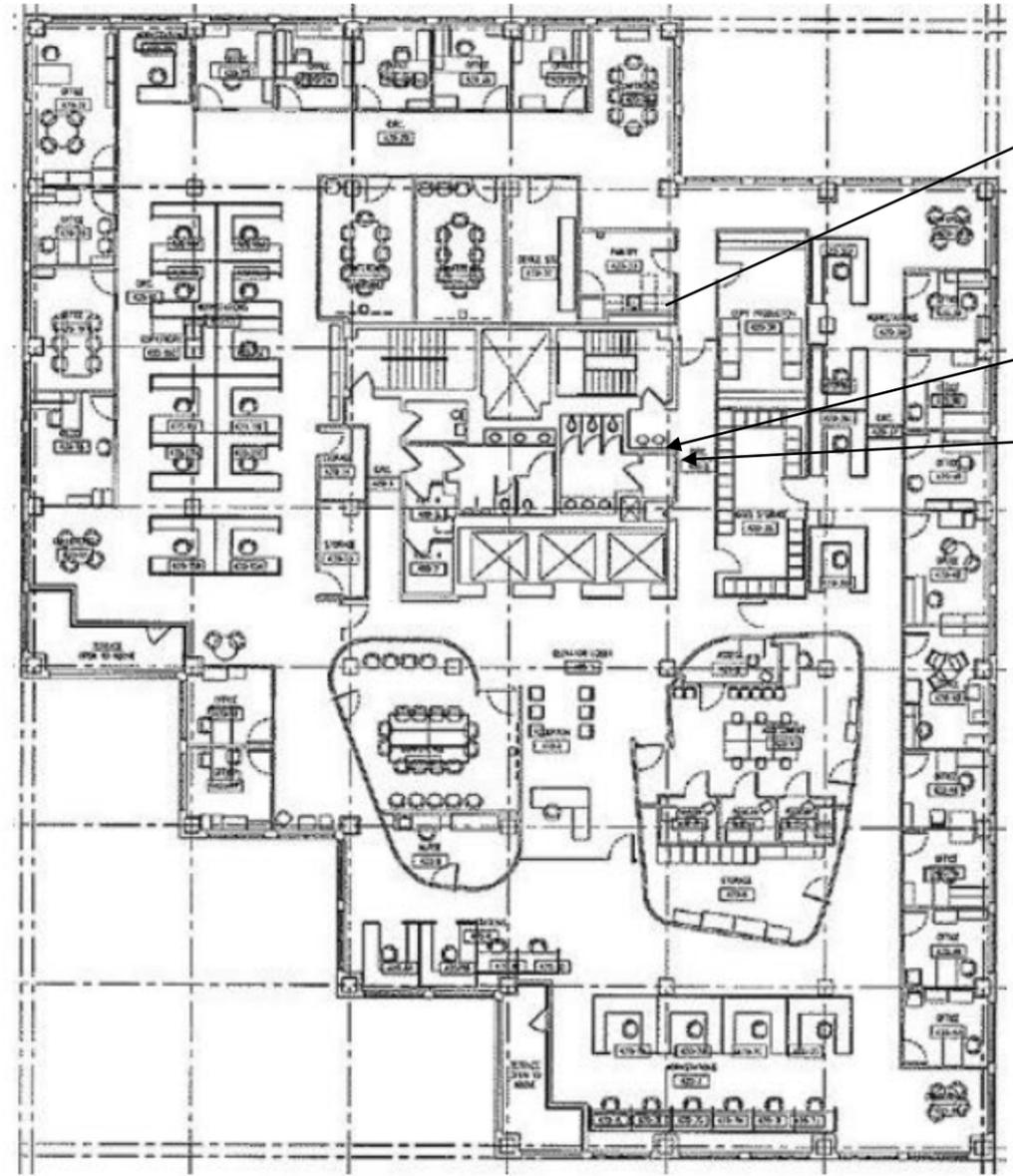
Sample Location Sketch

Scale: NTS

Project No.
47:11652-E

Site Visit:
06/1/21

4th Floor



CO420-33

COWF4R

COWF4L

- Elevated Lead
- Elevated Copper
- Elevated Lead & Copper

Central Office
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Alexandria, VA 22314



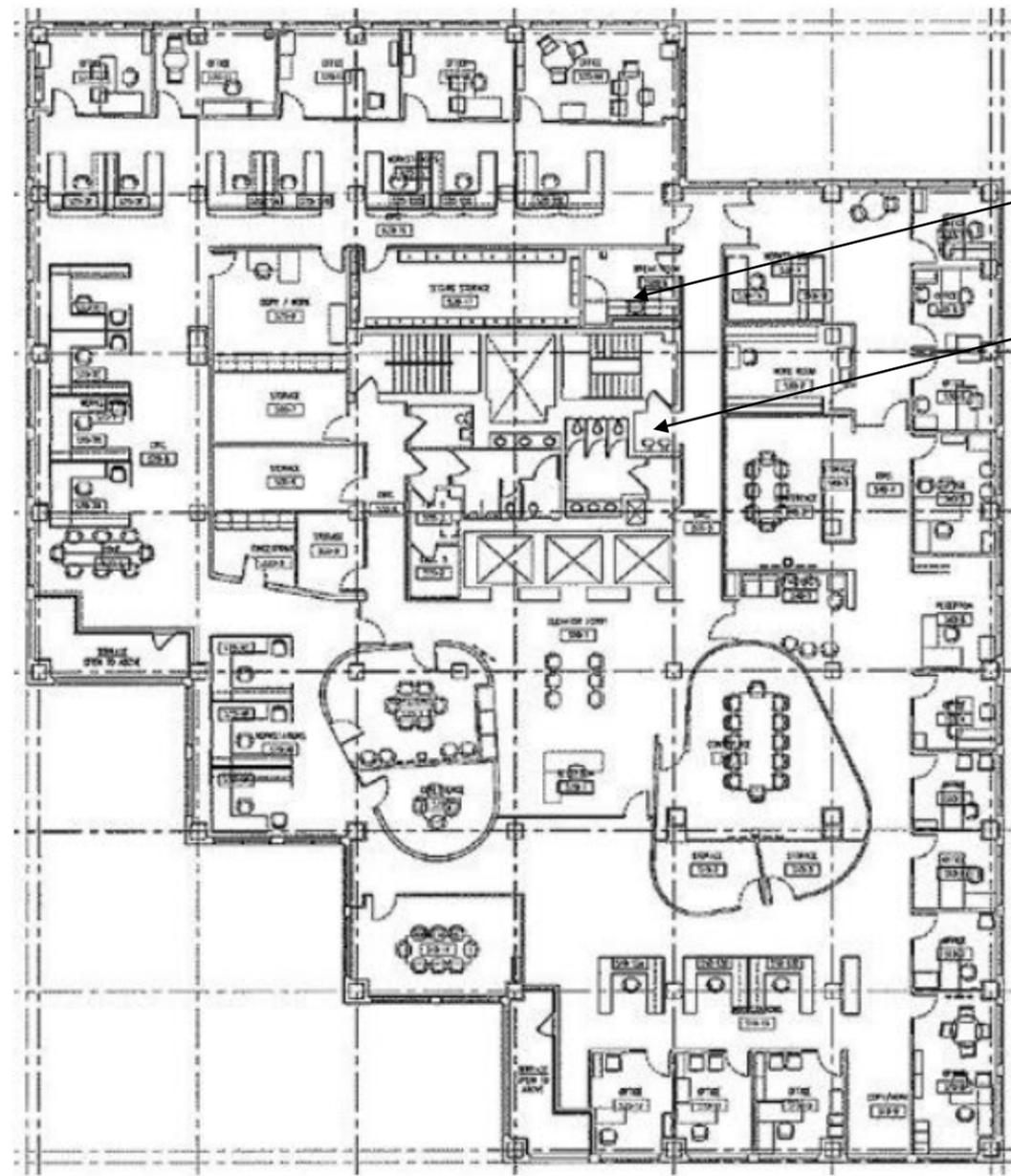
Sample Location Sketch

Scale: NTS

Project No.
47:11652-E

Site Visit:
06/1/21

5th Floor



CO500-6

COWF5B

Central Office
1340 Braddock Place
Alexandria, VA 22314



**Sample Location
Sketch**

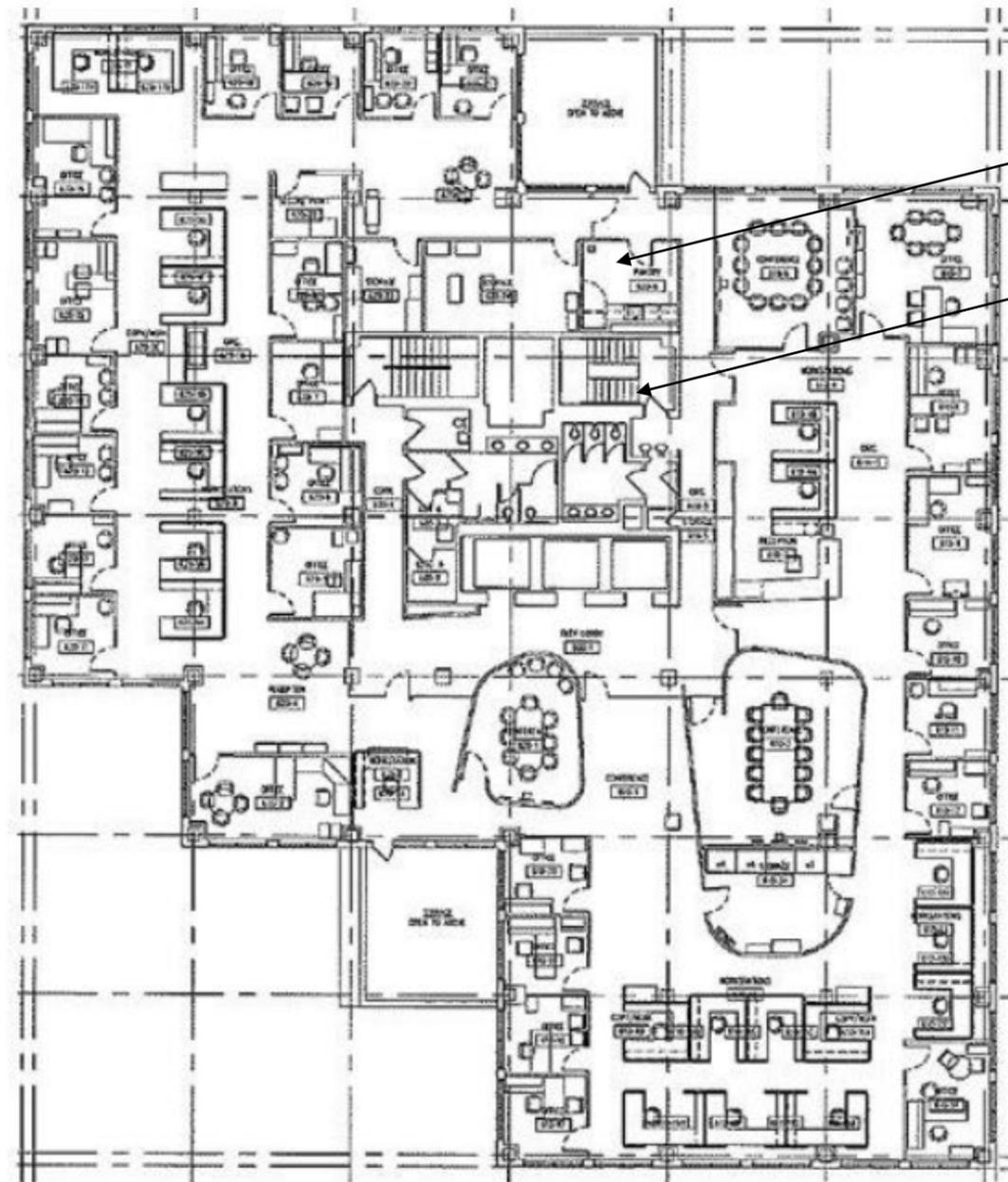
Scale: NTS

Project No.
47:11652-E

Site Visit:
06/1/21

-  Elevated Lead
-  Elevated Copper
-  Elevated Lead & Copper

6th Floor



CO600-6

COWF6B

- Elevated Lead
- Elevated Copper
- Elevated Lead & Copper

Central Office
1340 Braddock Place
Alexandria, VA 22314



Sample Location Sketch

Scale: NTS

Project No.
47:11652-E

Site Visit:
06/1/21

7th Floor



C0710-9

COWF7B

Central Office
1340 Braddock Place
Alexandria, VA 22314



**Sample Location
Sketch**

Scale: NTS

Project No.
47:11652-E

Site Visit:
06/1/21

-  Elevated Lead
-  Elevated Copper
-  Elevated Lead & Copper

Appendix II: Sample Table



Central Office Building Copper and Lead Drinking Water Results Table		
Sample Number	Copper Result (mg/L)	Lead Result (mg/L)
COWF1	0.233	<0.001
CO200-7	3.620	0.010
COWF2L	0.708	0.002
COWF2R	0.323	<0.001
COP3S	1.430	0.001
COWF3B	0.513	<0.001
CO420-33	0.143	<0.001
COWF4R	0.615	<0.001
COWF4L	0.370	<0.001
CO500-6	0.202	<0.001
COWF5B	0.577	0.002
CO600-6	0.195	<0.001
COWF6B	0.473	<0.001
CO710-9	0.437	<0.001
COWF7B	0.749	0.002

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 EPA Action Level

Orange = Above the VA Action Level

Appendix III: Laboratory Report(s)

14 June 2022

Lauren Kesslak
ECS-Chantilly
14026 Thunderbolt Place, Suite 100
Chantilly, VA 20151

RE: ACPS PERIODIC WATER MONITORING-CENTRAL OFFICE

Enclosed are the results of analyses for samples received by the laboratory on 06/06/22 13:15.

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,



Will Brewington
President

1500 Caton Center Dr Suite G
 Baltimore MD 21227
 410-247-7600
 www.mdspectral.com
 MD DW LabID 153

Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
COWF1		2060606-01	Drinking Water	06/01/22 00:00	06/06/22 13:15
CO200-7		2060606-02	Drinking Water	06/01/22 00:00	06/06/22 13:15
COWF2L		2060606-03	Drinking Water	06/01/22 00:00	06/06/22 13:15
COWF2R		2060606-04	Drinking Water	06/01/22 00:00	06/06/22 13:15
COP3S		2060606-05	Drinking Water	06/01/22 00:00	06/06/22 13:15
COWF3B		2060606-06	Drinking Water	06/01/22 00:00	06/06/22 13:15
CO420-33		2060606-07	Drinking Water	06/01/22 00:00	06/06/22 13:15
COWF4R		2060606-08	Drinking Water	06/01/22 00:00	06/06/22 13:15
COWF4L		2060606-09	Drinking Water	06/01/22 00:00	06/06/22 13:15
CO500-6		2060606-10	Drinking Water	06/01/22 00:00	06/06/22 13:15
COWF5B		2060606-11	Drinking Water	06/01/22 00:00	06/06/22 13:15
CO600-6		2060606-12	Drinking Water	06/01/22 00:00	06/06/22 13:15
COWF6B		2060606-13	Drinking Water	06/01/22 00:00	06/06/22 13:15
CO710-9		2060606-14	Drinking Water	06/01/22 00:00	06/06/22 13:15
COWF7B		2060606-15	Drinking Water	06/01/22 00:00	06/06/22 13:15

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

1500 Caton Center Dr Suite G
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 410-247-7600
 www.mdspectral.com
 MD DW LabID 153

Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

COWF1

2060606-01 (Drinking Water)
Sample Date: 06/01/22

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	233		ug/L	1.00	1.00	1	06/10/22	06/13/22 12:38	VVD
Lead	ND		ug/L	1.00	1.00	1	06/10/22	06/13/22 12:38	VVD

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Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

CO200-7

2060606-02 (Drinking Water)
Sample Date: 06/01/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Total Metals Analysis by EPA 200.8DW Prepared by 200.2-Digested Metals									
Copper	3620		ug/L	10.0	10.0	10	06/09/22	06/13/22 14:36	VVD
Lead	10.4		ug/L	10.0	10.0	10	06/09/22	06/13/22 14:36	VVD

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Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

COWF2L

2060606-03 (Drinking Water)
Sample Date: 06/01/22

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	708		ug/L	1.00	1.00	1	06/10/22	06/13/22 12:39	VVD
Lead	1.56		ug/L	1.00	1.00	1	06/10/22	06/13/22 12:39	VVD

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Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

COWF2R

2060606-04 (Drinking Water)

Sample Date: 06/01/22

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	323		ug/L	1.00	1.00	1	06/10/22	06/13/22 12:41	VVD
Lead	ND		ug/L	1.00	1.00	1	06/10/22	06/13/22 12:41	VVD

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Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

COP3S

2060606-05 (Drinking Water)
Sample Date: 06/01/22

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	1430		ug/L	100	100	100	06/10/22	06/13/22 13:20	VVD
Lead	1.45		ug/L	1.00	1.00	1	06/10/22	06/13/22 12:43	VVD

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Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

COWF3B

2060606-06 (Drinking Water)

Sample Date: 06/01/22

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	513		ug/L	1.00	1.00	1	06/10/22	06/13/22 12:44	VVD
Lead	ND		ug/L	1.00	1.00	1	06/10/22	06/13/22 12:44	VVD

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Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

CO420-33

2060606-07 (Drinking Water)

Sample Date: 06/01/22

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	143		ug/L	1.00	1.00	1	06/10/22	06/13/22 12:46	VVD
Lead	ND		ug/L	1.00	1.00	1	06/10/22	06/13/22 12:46	VVD



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 MD DW LabID 153

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Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

COWF4R

2060606-08 (Drinking Water)
Sample Date: 06/01/22

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	615		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:13	VVD
Lead	ND		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:13	VVD



Will Brewington, President

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1500 Caton Center Dr Suite G
 Baltimore MD 21227
 410-247-7600
 www.mdspectral.com
 MD DW LabID 153

Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

COWF4L

2060606-09 (Drinking Water)
Sample Date: 06/01/22

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	370		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:15	VVD
Lead	ND		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:15	VVD



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Will Brewington, President

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 MD DW LabID 153

Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

CO500-6

2060606-10 (Drinking Water)
Sample Date: 06/01/22

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	202		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:16	VVD
Lead	ND		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:16	VVD



Will Brewington, President

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 MD DW LabID 153

Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

COWF5B

2060606-11 (Drinking Water)
Sample Date: 06/01/22

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	577		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:41	VVD
Lead	ND		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:41	VVD

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 MD DW LabID 153

Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

CO600-6

**2060606-12 (Drinking Water)
 Sample Date: 06/01/22**

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	195		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:43	VVD
Lead	ND		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:43	VVD

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 MD DW LabID 153

Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

COWF6B

2060606-13 (Drinking Water)
Sample Date: 06/01/22

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	473		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:44	VVD
Lead	ND		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:44	VVD



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Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

CO710-9

2060606-14 (Drinking Water)
Sample Date: 06/01/22

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	437		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:46	VVD
Lead	ND		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:46	VVD



Will Brewington, President

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 MD DW LabID 153

Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
 Project Manager: Lauren Kesslak

Reported:
 06/14/22 16:29

COWF7B

2060606-15 (Drinking Water)
Sample Date: 06/01/22

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	749		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:47	VVD
Lead	ND		ug/L	1.00	1.00	1	06/10/22	06/13/22 13:47	VVD



Will Brewington, President

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Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
Project Manager: Lauren Kesslak

Reported:
06/14/22 16:29

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 B206165 - 200.2-Digested Metals

Blank (B206165-BLK1)

Prepared: 06/09/22 Analyzed: 06/10/22

Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						

LCS (B206165-BS1)

Prepared: 06/09/22 Analyzed: 06/10/22

Copper	10.4		1.00	ug/L	10.00		104	80-120		
Lead	10.2		1.00	ug/L	10.00		102	80-120		

Duplicate (B206165-DUP1)

Source: 2060605-11

Prepared: 06/09/22 Analyzed: 06/10/22

Copper	326		1.00	ug/L		321			2	20
Lead	1.95		1.00	ug/L		1.96			0.9	20

Matrix Spike (B206165-MS1)

Source: 2060605-11

Prepared: 06/09/22 Analyzed: 06/10/22

Copper	329		1.00	ug/L	10.00	321	83	80-120		
Lead	12.3		1.00	ug/L	10.00	1.96	103	80-120		

Batch B206196 - 200.8-No Digestion Metals

Blank (B206196-BLK1)

Prepared & Analyzed: 06/10/22

Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						

Blank (B206196-BLK2)

Prepared & Analyzed: 06/10/22

Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						

Blank (B206196-BLK3)

Prepared & Analyzed: 06/10/22

Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						



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Will Brewington, President

Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
Project Manager: Lauren Kessler

Reported:
06/14/22 16:29

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 B206196 - 200.8-No Digestion Metals										
Blank (B206196-BLK4)					Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
Blank (B206196-BLK5)					Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
Blank (B206196-BLK6)					Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
Blank (B206196-BLK7)					Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
Blank (B206196-BLK8)					Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
Blank (B206196-BLK9)					Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	ND		1.00	ug/L						
Lead	ND		1.00	ug/L						
LCS (B206196-BS1)					Prepared & Analyzed: 06/10/22					
Copper	10.3		1.00	ug/L	10.00		103	80-120		
Lead	10.1		1.00	ug/L	10.00		101	80-120		
LCS (B206196-BS2)					Prepared & Analyzed: 06/10/22					
Copper	9.48		1.00	ug/L	10.00		95	80-120		
Lead	9.40		1.00	ug/L	10.00		94	80-120		

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Will Brewington, President

Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
Project Manager: Lauren Kesslak

Reported:
06/14/22 16:29

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 B206196 - 200.8-No Digestion Metals										
LCS (B206196-BS3)					Prepared & Analyzed: 06/10/22					
Copper	9.80		1.00	ug/L	10.00		98	80-120		
Lead	9.55		1.00	ug/L	10.00		95	80-120		
LCS (B206196-BS4)					Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	10.1		1.00	ug/L	10.00		101	80-120		
Lead	9.81		1.00	ug/L	10.00		98	80-120		
LCS (B206196-BS5)					Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	9.00		1.00	ug/L	10.00		90	80-120		
Lead	8.67		1.00	ug/L	10.00		87	80-120		
LCS (B206196-BS6)					Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	11.5		1.00	ug/L	10.00		115	80-120		
Lead	11.1		1.00	ug/L	10.00		111	80-120		
LCS (B206196-BS7)					Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	11.2		1.00	ug/L	10.00		112	80-120		
Lead	10.9		1.00	ug/L	10.00		109	80-120		
LCS (B206196-BS8)					Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	11.2		1.00	ug/L	10.00		112	80-120		
Lead	10.9		1.00	ug/L	10.00		109	80-120		
LCS (B206196-BS9)					Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	11.5		1.00	ug/L	10.00		115	80-120		
Lead	11.2		1.00	ug/L	10.00		112	80-120		
Duplicate (B206196-DUP1)			Source: 2060604-01			Prepared & Analyzed: 06/10/22				
Copper	264		1.00	ug/L		264			0.01	20
Lead	ND		1.00	ug/L		ND				20

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Will Brewington, President

Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
Project Manager: Lauren Kesslak

Reported:
06/14/22 16:29

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 B206196 - 200.8-No Digestion Metals										
Duplicate (B206196-DUP2)			Source: 2060604-11			Prepared & Analyzed: 06/10/22				
Copper	243		1.00	ug/L		245			0.7	20
Lead	ND		1.00	ug/L		ND				20
Duplicate (B206196-DUP3)			Source: 2060605-01			Prepared & Analyzed: 06/10/22				
Copper	310		1.00	ug/L		309			0.3	20
Lead	ND		1.00	ug/L		ND				20
Duplicate (B206196-DUP4)			Source: 2060605-12			Prepared: 06/10/22 Analyzed: 06/13/22				
Copper	204		1.00	ug/L		204			0.1	20
Lead	ND		1.00	ug/L		ND				20
Duplicate (B206196-DUP5)			Source: 2060605-21			Prepared: 06/10/22 Analyzed: 06/13/22				
Copper	236		1.00	ug/L		235			0.4	20
Lead	ND		1.00	ug/L		ND				20
Duplicate (B206196-DUP6)			Source: 2060605-31			Prepared: 06/10/22 Analyzed: 06/13/22				
Copper	319		1.00	ug/L		316			1	20
Lead	1.41		1.00	ug/L		1.39			0.9	20
Duplicate (B206196-DUP7)			Source: 2060606-01			Prepared: 06/10/22 Analyzed: 06/13/22				
Copper	233		1.00	ug/L		233			0.03	20
Lead	ND		1.00	ug/L		ND				20
Duplicate (B206196-DUP8)			Source: 2060606-11			Prepared: 06/10/22 Analyzed: 06/13/22				
Copper	588		1.00	ug/L		577			2	20
Lead	ND		1.00	ug/L		ND				20
Duplicate (B206196-DUP9)			Source: 2060708-01			Prepared: 06/10/22 Analyzed: 06/13/22				
Copper	950		1.00	ug/L		944			0.6	20
Lead	1.08		1.00	ug/L		1.09			0.9	20

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Will Brewington, President

Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
Project Manager: Lauren Kesslak

Reported:
06/14/22 16:29

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 B206196 - 200.8-No Digestion Metals										
Matrix Spike (B206196-MS1)			Source: 2060604-01		Prepared & Analyzed: 06/10/22					
Copper	265	QM-4X	1.00	ug/L	10.00	264	7	80-120		
Lead	11.0		1.00	ug/L	10.00	ND	110	80-120		
Matrix Spike (B206196-MS2)			Source: 2060604-11		Prepared & Analyzed: 06/10/22					
Copper	248	QM-4X	1.00	ug/L	10.00	245	32	80-120		
Lead	10.4		1.00	ug/L	10.00	ND	104	80-120		
Matrix Spike (B206196-MS3)			Source: 2060605-01		Prepared & Analyzed: 06/10/22					
Copper	313	QM-4X	1.00	ug/L	10.00	309	34	80-120		
Lead	10.7		1.00	ug/L	10.00	ND	107	80-120		
Matrix Spike (B206196-MS4)			Source: 2060605-12		Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	207	QM-4X	1.00	ug/L	10.00	204	30	80-120		
Lead	10.5		1.00	ug/L	10.00	ND	105	80-120		
Matrix Spike (B206196-MS5)			Source: 2060605-21		Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	242	QM-4X	1.00	ug/L	10.00	235	66	80-120		
Lead	11.1		1.00	ug/L	10.00	ND	111	80-120		
Matrix Spike (B206196-MS6)			Source: 2060605-31		Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	320	QM-4X	1.00	ug/L	10.00	316	39	80-120		
Lead	12.2		1.00	ug/L	10.00	1.39	108	80-120		
Matrix Spike (B206196-MS7)			Source: 2060606-01		Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	239	QM-4X	1.00	ug/L	10.00	233	59	80-120		
Lead	10.9		1.00	ug/L	10.00	ND	109	80-120		
Matrix Spike (B206196-MS8)			Source: 2060606-11		Prepared: 06/10/22 Analyzed: 06/13/22					
Copper	585	QM-4X	1.00	ug/L	10.00	577	79	80-120		
Lead	11.2		1.00	ug/L	10.00	ND	112	80-120		

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Will Brewington, President

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Baltimore MD 21227
410-247-7600
www.mdspectral.com
MD DW LabID 153

Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
Project Manager: Lauren Kesslak

Reported:
06/14/22 16:29

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 B206196 - 200.8-No Digestion Metals

Matrix Spike (B206196-MS9)	Source: 2060708-01		Prepared: 06/10/22 Analyzed: 06/13/22							
Copper	940	QM-4X	1.00	ug/L	10.00	944	NR	80-120		
Lead	13.1		1.00	ug/L	10.00	1.09	120	80-120		



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Will Brewington, President

Project: ACPS PERIODIC WATER MONITORING-CENTRAL C

Project Number: 47:11652-E
Project Manager: Lauren Kesslak

Reported:
06/14/22 16:29

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.
- RE Sample reanalyses are done at the laboratory's discretion as a mechanism to improve data quality. Any client requested reanalysis will be identified with a sample qualifier.
- ND Analyte NOT DETECTED at or above the reporting limit
- 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

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Will Brewington, President

Company Name: ECS Mid-Atlantic		Project Manager: Lauren Kessler		Analysis Requested										CHAIN-OF-CUSTODY RECORD																	
Project Name: ACPS Periodic Water Monitoring – Central Office		Project ID: 47: 11652-E												No. of Containers			Lead in Drinking Water	Copper in Drinking Water											Maryland Spectral Services, Inc. 1500 Caton Center Drive, Suite G Baltimore, MD 21227 410-247-7600 • Fax 410-247-7602 reporting@mdspectral.com		
Sampler(s): Maria Reynozo		P.O. Number:																													
Field Sample ID	Date	Time	DW	Water	Soil	Other	No. of Containers	Lead in Drinking Water	Copper in Drinking Water									Preservative	Field Notes	MSS Lab ID											
COWF1	6/1/22		X					X	X												2060605-01										
CO200-7			X					X	X												- 02										
COWF2L			X					X	X												- 03										
COWF2R			X					X	X												- 04										
COP3S			X					X	X												- 05										
COWF3B			X					X	X												- 06										
CO420-33			X					X	X												- 07										
COWF4R			X					X	X												- 08										
COWF4L			X					X	X												- 09										
Samples Continue on Next Page			X					X	X												LF 6-6-22										
Relinquished by: (Signature) <i>John Fauner</i>		Date/Time 6/3/2022		Received by: (Signature) <i>[Signature]</i>		Relinquished by: (Signature) <i>[Signature]</i>		Date/Time		Received by: (Signature) <i>[Signature]</i>																					
(Printed) John Fauner Maria Reynozo				(Printed)		(Printed)				(Printed)																					
Relinquished by: (Signature) <i>[Signature]</i>		Date/Time 6-6-22		Received by Lab: (Signature) <i>[Signature]</i>		Turn Around Time:		Lab Use:																							
(Printed)		13:15		(Printed) Lori Foster		<input type="checkbox"/> Normal (7 day) <input 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 24.8		<input type="checkbox"/> Received on Ice <input type="checkbox"/> Received same day																					
Delivery Method: <input checked="" type="checkbox"/> 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: Lead in Drinking Water Analysis for each sample on attached pages						Sample Disposal: <input checked="" type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by lab <input type="checkbox"/> Archive for ____ days																							



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CO500-6 2060606-10
COWF5B - 11
CO600-6 - 12
COWF6B - 13
CO710-9 - 14
COWF7B - 15