



November 9, 2018

Mr. Bernie Bowers
Operations Supervisor
Wyandotte Public Schools
639 Oak Street
Wyandotte, Michigan 48192
Bbowers@wy.k12.mi.us

RE: **AEG Project #AE180812**
Lead Drinking Water Sampling
Jefferson Elementary School

Dear Mr. Bowers:

Pursuant to the request of Wyandotte Public Schools, Arch Environmental Group, Inc. (AEG) collected five (5) representative first draw drinking water lead samples on October 13, 2018, at Jefferson Elementary School.

General Information about Lead

There is no federal law requiring testing of drinking water in schools and childcare facilities, except for those that have and/or operate their own public water system and therefore are subject to comply with the Safe Drinking Water Act (SDWA). Drinking water programs are conducted on a voluntary basis.

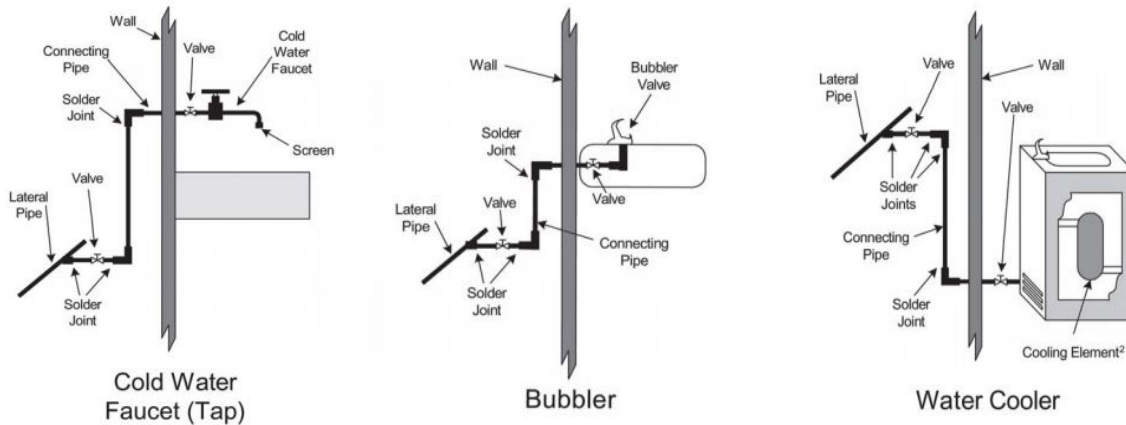
Lead enters drinking water:

- 1. Through Corrosion*
Most lead gets into drinking water after the water leaves the local well or treatment plant and comes into contact with plumbing materials containing lead. These include lead pipe and lead solder (commonly used until 1986) as well as faucets, valves, and other components made of brass. The physical/chemical interaction that occurs between the water and plumbing is referred to as corrosion. The extent to which corrosion occurs contributes to the amount of lead that can be released into the drinking water.
- 2. Faucet Aerators*
Many taps that are used to provide water for human consumption have an aerator as part of the faucet assembly. Screens are not intended to remove contaminants in the water but may trap sediment or debris as water passes through the faucet. Lead bearing sediment may end up in drinking water from physical corrosion of leaded solder and can build up in the aerator over time.
- 3. Galvanized Piping*
Additionally, galvanized pipes are old iron pipes that were installed in many homes built before the 1960s. Over many years, old corrosion scales build up inside the walls of galvanized pipes. These pipes can cause discolored water and pressure issues. Galvanized pipes can also release lead in water if you have or ever have had a lead service pipe.
- 4. Brass Pipes, Faucets Fittings and Valves*
Brass devices passing the test can contribute to lead levels at the tap.

Action Levels

The Lead and Copper Rule (LCR) is a treatment technique rule. Instead of setting a maximum contaminant level (MCL) for lead or copper, the rule requires public water systems to take certain actions to minimize lead and copper in drinking water. The Action Level for lead is 15 ug/L (15 ppb). Beginning January 1, 2025, the action level for lead in the State of Michigan will be lowered to 12 ug/L (12 ppb). In August 2016, the MDEQ recommended school districts use the contaminate level goal of 5 ug/L (5 ppb). For this sampling event, the District shall utilize 15 ug/L (ppb) as the Action Level.

Common Drinking Water Outlets



Collection Procedures

All water samples were collected utilizing 250 milliliters (mL) sample bottles as recommended in the August 1, 2016, Version 3.0 "MDEQ Guidance on Drinking Water Sampling for Lead and Copper at Schools and Daycares on Community Water Supplies".

First Draw Sampling:

AEG collected first draw samples. A first draw is the water that is the first to come out of the tap after the period of 8-24 hours of inactivity.

Locations below Action Level

- Jefferson-01: In Hallway, Across from Room 104, Bottle Fill.
- Jefferson-02: Teachers Lounge, Faucet.
- Jefferson-03: Room 116, Bubbler.
- Jefferson-04: Room 116, Faucet.
- Jefferson-05: Room 118, Bubbler.

If you have any questions regarding the report, please feel free to contact the cleanWATER team at (248) 426-0165 [office].

Sincerely,

Arch Environmental Group, Inc.
Environmental Services

Alec Staber

Attachments: Results Table
Analytical Results & Chain of Custody



Wyandotte Public Schools
Lead Drinking Water Analysis
Project Number: AE180812

Jefferson Elementary School							
Date of Sampling: 10/13/2018							
Sampler: Lindsey Eveleth							
Sample #	Location	Type ¹	Time Collected	Internal Action Level (ug/L)	Lead Results (ug/L)	Aerator Present Y/N	Notes
Jefferson-01	In Hallway, Across from Room 104, Bottle Fill	BT	11:51 AM	15	ND ³	N	First Draw. Water cooler was reviewed against the EPA Fact Sheet to determine that it is not lead lined.
Jefferson-02	Teachers Lounge, Faucet	KF	11:58 AM	15	3	Y	First Draw
Jefferson-03	Room 116, Bubblers	B	12:00 PM	15	2	N	First Draw
Jefferson-04	Room 116, Faucet	F	12:02 PM	15	3	N	First Draw
Jefferson-05	Room 118, Bubblers	B	12:05 PM	15	4	N	First Draw

1) Type: B = Bubblers, BT = Bottle Fill/Cooler, WC = Water Cooler, C = Combination Sink, F = Faucet, KF = Kitchen Faucet, I = Ice Machine, KK = Kitchen Kettle, PC = Plumbed Coffee
 2) <https://www.epa.gov/your-drinking-water/table-regulated-drinking-water-contaminants>
 3) ND = Non Detected at Reported Detection Limit of 1 ug/L
 4) NT = Not Tested

October 22, 2018

Arch Environmental Group
37720 Interchange Dr.
Farmington Hills, MI 48335

Subject: Jefferson Elementary School IFD
AE180812-WPS

Dear Ms. Koloski :

Thank you for making Brighton Analytical, L.L.C. your laboratory of choice. Attached are the results for the samples submitted on 10/15/2018 for the above mentioned project. NELAP/TNI Accredited Analysis and MDEQ Drinking Water Certified Analysis will be identified in their respective reporting formats. Hard copies can be supplied at your request for a fee of \$20.00 per copy.

The invoice for this project will be emailed separately. If you have any questions concerning the data or invoice, please don't hesitate to contact our office. We welcome your comments and suggestions to improve our quality systems. Please reference Brighton Analytical, L.L.C. Project ID 53459 when calling or emailing. We thank you for this opportunity to partner with you on this project and hope to work with you again in the future.

Sincerely,
Brighton Analytical, L.L.C.



Brighton Analytical LLC
 2105 Pless Drive
 Brighton, Michigan 48114
 Phone: (810)229-7575 (810)229-8650
 e-mail: bai-brighton@sbcglobal.net
 MDNRE Certified #9404
 NELAC Accredited #176507

Sample Date/Time: 10/13/2018 11:51
 Submit Date/Time: 10/15/2018 12:40
 Report Date: 10/22/2018

Arch Environmental Group
 37720 Interchange Dr.
 Farmington Hills, MI 48335

BA Project # **53459**
 BA Sample ID **CI05057**

Project Name: **Jefferson Elementary School IFD**
 Project Number: **AE180812-WPS**
 Sample ID: **Jefferson ES-01 BottleFill Acrs 104**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
Drinking Water Metal Analysis							
Total Lead (Drinking Water)	Not detected	ug/L	1	15	EPA 200.8 rev5.4	17:16	10/18/2018

RL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

MCL = Maximum contaminant Levels.

Analysis not specifically identified as drinking water are for non-regulatory compliance purposes.

Released by 

Date 10/22/2018



Brighton Analytical LLC
 2105 Pless Drive
 Brighton, Michigan 48114
 Phone: (810)229-7575 (810)229-8650
 e-mail: bai-brighton@sbcglobal.net
 MDNRE Certified #9404
 NELAC Accredited #176507

Sample Date/Time: 10/13/2018 11:58
 Submit Date/Time: 10/15/2018 12:40
 Report Date: 10/22/2018

Arch Environmental Group
 37720 Interchange Dr.
 Farmington Hills, MI 48335

BA Project # **53459**
 BA Sample ID **CI05058**

Project Name: **Jefferson Elementary School IFD**
 Project Number: **AE180812-WPS**
 Sample ID: **Jefferson ES-02 TeachersLng Faucet**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
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Drinking Water Metal Analysis

Total Lead (Drinking Water)	3	ug/L	1	15	EPA 200.8 rev5.4	17:19	10/18/2018
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RL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

MCL = Maximum contaminant Levels.

Analysis not specifically identified as drinking water are for non-regulatory compliance purposes.

Released by 

Date 10/22/2018



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Sample Date/Time: 10/13/2018 12:00
 Submit Date/Time: 10/15/2018 12:40
 Report Date: 10/22/2018

Arch Environmental Group
 37720 Interchange Dr.
 Farmington Hills, MI 48335

BA Project # **53459**
 BA Sample ID **CI05059**

Project Name: **Jefferson Elementary School IFD**
 Project Number: **AE180812-WPS**
 Sample ID: **Jefferson ES-03 Room116, Bubbler**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
Drinking Water Metal Analysis							
Total Lead (Drinking Water)	2	ug/L	1	15	EPA 200.8 rev5.4	17:22	10/18/2018

RL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

MCL = Maximum contaminant Levels.

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Released by 

Date 10/22/2018



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 Brighton, Michigan 48114
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 e-mail: bai-brighton@sbcglobal.net
 MDNRE Certified #9404
 NELAC Accredited #176507

Sample Date/Time: 10/13/2018 12:02
 Submit Date/Time: 10/15/2018 12:40
 Report Date: 10/22/2018

Arch Environmental Group
 37720 Interchange Dr.
 Farmington Hills, MI 48335

BA Project # **53459**
 BA Sample ID **CI05060**

Project Name: **Jefferson Elementary School IFD**
 Project Number: **AE180812-WPS**
 Sample ID: **Jefferson ES-04 Room 116 Faucet**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
Drinking Water Metal Analysis							
Total Lead (Drinking Water)	3	ug/L	1	15	EPA 200.8 rev5.4	17:25	10/18/2018

RL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

MCL = Maximum contaminant Levels.

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Released by 

Date 10/22/2018



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 Brighton, Michigan 48114
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 e-mail: bai-brighton@sbcglobal.net
 MDNRE Certified #9404
 NELAC Accredited #176507

Sample Date/Time: 10/13/2018 12:05
 Submit Date/Time: 10/15/2018 12:40
 Report Date: 10/22/2018

Arch Environmental Group
 37720 Interchange Dr.
 Farmington Hills, MI 48335

BA Project # **53459**
 BA Sample ID **CI05061**

Project Name: **Jefferson Elementary School IFD**
 Project Number: **AE180812-WPS**
 Sample ID: **Jefferson ES-05 Room 118, Bubbler**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
Drinking Water Metal Analysis							
Total Lead (Drinking Water)	4	ug/L	1	15	EPA 200.8 rev5.4	17:37	10/18/2018

RL=Reported detection limit for analytical method requested. Some compounds require special analytical methods to achieve MDNR designated target detection limits (TDL).

MCL = Maximum contaminant Levels.

Analysis not specifically identified as drinking water are for non-regulatory compliance purposes.

Released by 

Date 10/22/2018



Brighton Analytical, L.L.C.™

Email: bai-brighton@sbcglobal.net

2105 Pless Drive
Brighton, MI 48114

Phone: 810-229-7575
Fax: 810-229-8650

BA PROJECT #:

53459

Analysis Requested/Method

PAGE 1 OF 1

COMPANY/MAILING ADDRESS:

Arch Environmental Group

ATTN: Lauren Krogski

PHONE:

FAX OR EMAIL: labs@archenvgroup.com

Samples received within hold time? yes no

Temperature of samples °C: 0N 16

pHs verified in login? yes no

Headspace/bubbles in VOA's? yes no n/a

Sample containers and COC match? yes no

BILLING ADDRESS (IF REQUIRED):

Drinking H₂O:

Fax to LCHD? yes no

Chlorinated Water Supply? yes no

AMT.: _____

MCL Failure: yes no

Client Notified (date/time/initials): _____

PROJECT NAME: Jefferson Elementary School IFD

PROJECT #: BE150812

PO #: (PLEASE NOTE IF DIFFERENT BILLING ADDRESS)
Wyandotte Public Schools

Sample collected by: Lindsay Everett

REQUESTED TURNAROUND: (circle one)
Rush: 1-3 business days (verify with lab & specify date needed)
1 Day = 2.5X Cost 2 Day = 2X Cost 3 Day = 1.5X Cost
Standard: 5 business days

If RUSH, approved by:

Sample Coll.:

Container Type & Quantity

VOA'S (PRES) Y N N/A	HDPE UNPRESERVED	HDPE HNO ₃	HDPE H ₂ SO ₄	HDPE NaOH	AMBER PRESERVED?	GLASS, NO PRESERVATIVE	STERILIZED BACTERIA	MEOH Preserved Y N
			X					

Sample Matrix

DW
DO

Brighton ID #	Sample Description	Date	Time
1) 105052	Jefferson ES-01 Bottle fill across from 104	10/13	1151
2) 51	Jefferson ES-02 Plumbing Lobby no faucet		1158
3) 09	Jefferson ES-03 Room 116, Bubbler		1200
4) 60	Jefferson ES-04 Room 116 faucet		1202
5) 61	Jefferson ES-05 Room 115, Bubbler		1205
6)			
7)			
8)			
9)			
10)			

Special Instructions:

Please fill out the Chain of Custody completely and review. Incorrect or incomplete information will result in a "hold" on all analyses.

Trans. #	RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:	Trans. #	RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:
1	[Signature]	[Signature]	10/15/08	10:40	3				
2	[Signature]	[Signature]	10/15/08	12:40	4				



BRIGHTON ANALYTICAL, LLC

QUALITY ASSURANCE/QUALITY
CONTROL

ICP-MS

METHOD 200.8/6020

REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date: 10/18/2018 Standard ID: 092618 H2O Batch: 10/17/2018 B4
 Matrix Spike Lab ID: CI05060 Matrix: Total Analyst: LT

Metals	Matrix Spike - Precision *			Matrix Spike - Accuracy**				Miscellaneous***		
	Matrix Spike (ug/kg)	Matrix Spike Dup (ug/kg)	RPD (%)	Spk Conc (ug/kg)	MS Recovery (%)	MSD Recovery (%)	Sample Conc (ug/kg)	Method Blk (ug/kg)	LCS-Method STD (%)	Ind. Std. (%)
Lead	1095	1056	3.6	1000	109.2	105.3	3	<1	103.3	100.1

* Matrix spike precision range +/- 20% RPD

** Matrix spike accuracy range +/- 20% recovery

*** LCS accuracy range +/- 15% recovery / Ind std accuracy range +/- 10% recovery

Comments: _____