



healthAIR - Industrial Hygiene Services cleanWATER - Consulting & Testing Services safeEARTH - Hazardous Waste & Recycling Services

December 4, 2020

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 November 18, 2020, 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.

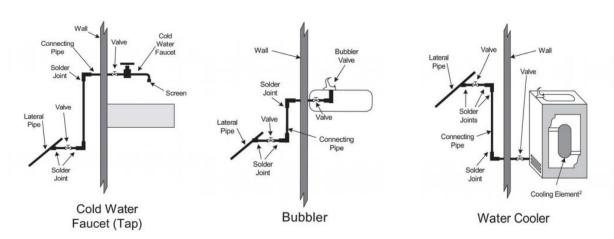
4. Brass Pipes, Faucets Fittings and Valves

Brass used prior to 2014 to deliver drinking water can contribute to lead levels at the tap. Lead has long been used in the foundry process to make brass castings pressure tight. Lead is sometimes added in concentrations of about 2%.

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 Michigan Department of Environment, Great Lakes, and Energy (EGLE) recommended school districts use the contaminate level goal of 5 ug/L (5 ppb). Finally, in May of 2019, The American Academy of Pediatrics called for new federal standards to ensure water lead concentrations do not exceed 1 ug/L (1 ppb). For this sampling event, the District shall utilize 12 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 "EGLE Guidance on Drinking Water Sampling for Lead and Copper at Schools and Daycares on Community Water Supplies". Sample results are representative of the specific fixture sampled and do not represent the distribution system or other fixtures.

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 above Action Level

- Jefferson-03: Room 116, Faucet
- Jefferson-04: Room 118, Faucet

AEG recommends the that the District remove the locations identified above the Action Level from service (do not shut off) and follow-up flush sampling conducted from the locations identified with elevated lead. Additionally, a plumbing assessment should be conducted to evaluate possible sources of lead and determine if corrective actions are required.



Pg. 2

Jefferson Elementary School

AE180812 Pg. 3

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.

Brendan Koziol

Environmental Services

Brendan Koziol Consultant

Attachments: **Photos**

Results Table

Analytical Results & Chain of Custody





Jefferson-03: Room 116, Faucet





Jefferson-04: Room 118, Faucet





Wyandotte Public Schools Drinking Water Analysis Project Number: AE180812

Jefferson Elementary School

Date of Sampling: November 18, 2020

Sampler: Evan Gist

Sample #	Location	Type¹	Time Collected	District Lead Action Level (ug/L) ²	Lead Results (ug/L)	Aerator Present Y/N	Notes
	Hallway, Outside of Room 104,				2		
Jefferson-01	Hydration Station, Bottle Fill	Hydration Station	2:53 PM	12	ND^3	Yes	First Draw.
	Teachers Lounge, Room 100, Kitchen						
Jefferson-02	Faucet	Kitchen Faucet	2:58 PM	12	2	Yes	First Draw.
Jefferson-03	Room 116, Faucet	Faucet	3:01 PM	12	33	Yes	First Draw.
Jefferson-04	Room 118, Faucet	Faucet	3:04 PM	12	13	Yes	First Draw.
	Hallway, Outside of Room 109,						
Jefferson-05	Hydration Station, Bottle Fill	Hydration Station	3:10 AM	12	ND	Yes	First Draw.

¹⁾ Type: B = Bubbler, BT = Bottle Fill/Cooler, WC = Water Cooler, C = Combination Sink, F = Faucet, KF = Kitchen Faucet, I = Ice Machine, KK = Kitchen Kettle, PC = Plumed Coffee

²⁾ https://www.epa.gov/your-drinking-water/table-regulated-drinking-water-contaminante

³⁾ ND = Non Detected at Reported Detection Limit of 1 ug/L

⁴⁾ NT = Not Tested



2105 Pless Drive Brighton, Michigan 48114 Phone (810)229-7575 Fax (810)229-8650 E-mail bai-brighton@sbcglobal.net

December 02, 2020

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

Subject: Jefferson Elementary School IFD

AE180812-WPS

Dear Ms. Eveleth:

Thank you for making Brighton Analytical, L.L.C. your laboratory of choice. Attached are the results for the samples submitted on 11/19/2020 for the above mentioned project. NELAP/TNI Accredited Analysis and EGLE 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 71788 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.







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

Sample Date/Time: 11/18/2020 Submit Date/Time: 11/19/2020

Report Date: 12/02/2020

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

BA Project # 71788 Project Name: Jefferson Elementary School IFD

14:53

13:30

BA Sample ID CN07220 Project Number: AE180812-WPS

Sample ID: Jefferson-01 Hallway Outside of Room 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 1.0 15 EPA 200.8 rev5.4 13:42 12/01/2020

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

MCL = Maximum contaminant Levels.

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

Released by



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

Sample Date/Time: 11/18/2020 14:58 Submit Date/Time: 11/19/2020 13:30

12/02/2020

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

BA Project #
BA Sample ID

Report Date:

71788

CN07221

Project Name:

Jefferson Elementary School IFD

Project Number:

AE180812-WPS

Sample ID: Jefferson-02 Teachers Lounge Room 100

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
Drinking Water Metal Analysis							
Total Lead (Drinking Water)	2	ug/L	1.0	15	EPA 200.8 rev5.4	13:45	12/01/2020

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

MCL = Maximum contaminant Levels.

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

Released by



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

Sample Date/Time: 11/18/2020 15:01 Submit Date/Time: 11/19/2020 13:30

12/02/2020

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

BA Project #

Report Date:

71788

BA Sample ID **CN07222**

Project Name:

Jefferson Elementary School IFD

Project Number:

AE180812-WPS

Sample ID: Jefferson-03 Classroom 116

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
Drinking Water Metal Analysis							
Total Lead (Drinking Water)	33	ug/L	1.0	15	EPA 200.8 rev5.4	13:48	12/01/2020

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

MCL = Maximum contaminant Levels.

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

Released by



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

Sample Date/Time: 11/18/2020 Submit Date/Time: 11/19/2020

Report Date: 12/02/2020

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

BA Project # **7178**

71788

BA Sample ID **CN07223**

Project Name: J

Jefferson Elementary School IFD

Project Number:

AE180812-WPS

Sample ID: Jefferson-04 Classroom 118

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
Drinking Water Metal Analysis							
Total Lead (Drinking Water)	13	ug/L	1.0	15	EPA 200.8 rev5.4	13:51	12/01/2020

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

15:04

13:30

MCL = Maximum contaminant Levels.

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

Released by



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

 Sample Date/Time:
 11/18/2020
 15:10

 Submit Date/Time:
 11/19/2020
 13:30

 Report Date:
 12/02/2020

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

BA Project #

71788

BA Sample ID

CN07224

Project Name:

Jefferson Elementary School IFD

Project Number:

AE180812-WPS

Sample ID: Jefferson-05 Hallway Outside of Room 109

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
Drinking Water Metal Analysis							
Total Lead (Drinking Water)	Not detected	ug/L	1.0	15	EPA 200.8 rev5.4	13:54	12/01/2020

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

MCL = Maximum contaminant Levels.

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

Released by

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4 22	Jefferson-04 Classroom 118	3:04p	11/18/2020				×				DW	×						
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BRIGHTON ANALYTICAL, LLC

QUALITY ASSURANCE/QUALITY CONTROL

ICP-MS METHOD 200.8/6020

REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date:	12/1/2020	Standard ID: 111120 H2O	Batch: 11/24/2020 B2
Matrix Spike Lab ID;	CN07214	Matrix: Total	Analyst: MH

11	Matrix Spike - F	Precision *		Matrix Spike	e - Accurac	·y**		Miscellaned)us***	
Metals	Matrix Spike (ug/L)	Matrix Spike Dup (ug/L)	RPD (%)	Spk Conc (ug/L)	MS Recovery (%)	MSD Recovery (%)	Sample Conc (ug/L)	Method Blk (ug/L)	LCS- Method STD (%)	Ind. Std. (%)
Lead	1021	1012	0.9	1000	99.9	99.0	22	<1	102.1	107.1

Comments:	

^{*} Matrix spike precision range +/- 20% RPD

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

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