



November 18, 2022

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

RE: **AEG Project # AE220046**
Lead Drinking Water Sampling
Monroe 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 5, 2022, at Monroe Elementary School during a normal usage period.

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 line.

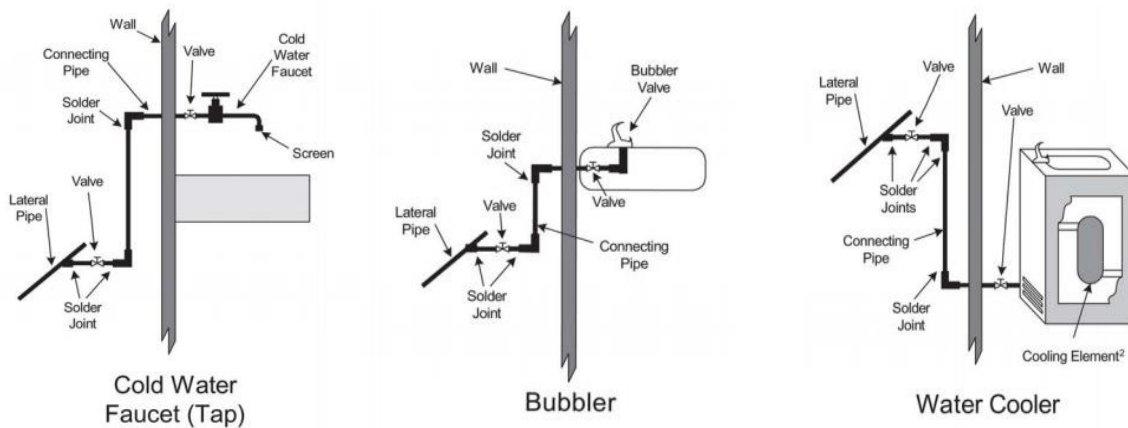
4. *Brass Pipes, Faucets Fittings and Valves*

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 milliliter (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.

All locations sampled identified lead below the 12 ug/L Action Level. No further action is recommended at this time.

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



Victoria Heed
Consultant, D-5 Waterworks Operator #22152

Attachments: Results Table
 Analytical Results & Chain of Custody



Wyandotte Public Schools
 Drinking Water Analysis
 Project Number: AE220046

Monroe Elementary School									
Date of Sampling: November 5, 2022									
Sampler: Zachary Fortin									
Sample #	Location	Type ¹	Time Collected	District Lead Action Level (ug/L) ²	Lead Results (ug/L)	Aerator Present Y/N	POU Filter Present Y/N	Filter Date/Color	Notes
Monroe-01	Hallway, Main Entrance, Hydration Station, Bottle Fill	HS	12:02 PM	12	ND ³	Y	Y	Green	Initial First Draw
Monroe-02	Staff Lounge, Kitchen Faucet	KF	11:55 AM	12	ND	Y	N	N/A	Initial First Draw
Monroe-03	Second Floor, Hallway Next to Room 25, Hydration Station, Bottle Fill	HS	12:18 PM	12	ND	Y	Y	Green	Initial First Draw
Monroe-04	East Entrance, Stairwell, Hydration station, Water Cooler	HS	12:14 PM	12	ND	N	Y	Green	Initial First Draw
Monroe-05	Room 14, Faucet	F	12:07 PM	12	2	N	N	N/A	Initial First Draw

- 1) Type: B = Bubbler, HS = Hydration Station, BT = Single Bottle Fill, WC = Single Water Cooler, C = Combination Sink, F = Faucet, KF = Kitchen Faucet, I = Ice Machine, KK = Kitchen Kettle, PC = Plumed Coffee Machine, G = Glass Filler
 2) https://www.epa.gov/sites/default/files/2016-06/documents/npwdr_complete_table.pdf
 3) ND = Non-Detected at Reported Detection Limit of 1 ug/L

November 16, 2022

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

Subject: Monroe Elementary School IFD
AE220046 - WPS

Dear Ms. Sendra :

Thank you for making Brighton Analytical, L.L.C. your laboratory of choice. Attached are the results for the samples submitted on 11/09/2022 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 85905 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
 EGLE Certified #9404
 NELAC Accredited #176507

Sample Date/Time: 11/05/2022 12:02
 Submit Date/Time: 11/09/2022 13:40
 Report Date: 11/16/2022

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

BA Project # **85905**
 BA Sample ID **CS03233**

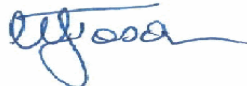
Project Name: **Monroe Elementary School IFD**
 Project Number: **AE220046 - WPS**
 Sample ID: **Monroe-01 Hallway Main Entrance Hydration Station BF**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analyst	Analysis Date
Drinking Water Metal Analysis								
Total Lead (Drinking Water)	Not detected	ug/L	1	15	EPA 200.8 rev5.4	11:09	LT	11/15/2022

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 
 Date 11/16/2022



Brighton Analytical LLC
 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: 11/05/2022 11:55
 Submit Date/Time: 11/09/2022 13:40
 Report Date: 11/16/2022

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

BA Project # **85905**
 BA Sample ID **CS03234**

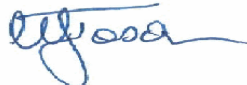
Project Name: **Monroe Elementary School IFD**
 Project Number: **AE220046 - WPS**
 Sample ID: **Monroe-02 Staff Lounge Kitchen Faucet**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analyst	Analysis Date
Drinking Water Metal Analysis								
Total Lead (Drinking Water)	Not detected	ug/L	1	15	EPA 200.8 rev5.4	11:11	LT	11/15/2022

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 
 Date 11/16/2022



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Sample Date/Time: 11/05/2022 12:18
 Submit Date/Time: 11/09/2022 13:40
 Report Date: 11/16/2022

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

BA Project # **85905**
 BA Sample ID **CS03235**

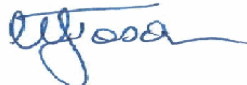
Project Name: **Monroe Elementary School IFD**
 Project Number: **AE220046 - WPS**
 Sample ID: **Monroe-03 Second Floor Hallway Next Room 25 HydSta BF**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analyst	Analysis Date
Drinking Water Metal Analysis								
Total Lead (Drinking Water)	Not detected	ug/L	1	15	EPA 200.8 rev5.4	11:14	LT	11/15/2022

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.

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Released by 

 Date 11/16/2022



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 Phone: (810)229-7575 (810)229-8650
 e-mail: bai-brighton@sbcglobal.net
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Sample Date/Time: 11/05/2022 12:14
 Submit Date/Time: 11/09/2022 13:40
 Report Date: 11/16/2022

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

BA Project # **85905**
 BA Sample ID **CS03236**

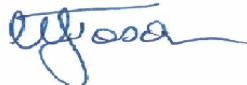
Project Name: **Monroe Elementary School IFD**
 Project Number: **AE220046 - WPS**
 Sample ID: **Monroe-04 East Entrance Stairwell Hydration Station WC**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analyst	Analysis Date
Drinking Water Metal Analysis								
Total Lead (Drinking Water)	Not detected	ug/L	1	15	EPA 200.8 rev5.4	11:16	LT	11/15/2022

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 
 Date 11/16/2022



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 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: 11/05/2022 12:07
 Submit Date/Time: 11/09/2022 13:40
 Report Date: 11/16/2022

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

BA Project # **85905**
 BA Sample ID **CS03237**

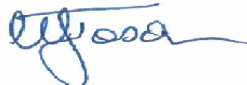
Project Name: **Monroe Elementary School IFD**
 Project Number: **AE220046 - WPS**
 Sample ID: **Monroe-05 Room 14 Faucet**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analyst	Analysis Date
Drinking Water Metal Analysis								
Total Lead (Drinking Water)	2	ug/L	1	15	EPA 200.8 rev5.4	11:18	LT	11/15/2022

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 

 Date 11/16/2022



Brighton Analytical, L.L.C™
 2105 Pless Drive
 Brighton, MI 48114
 Phone: 810-229-7575 Fax: 810-229-8650

PROJECT NAME:
 (48 SPACES MAXIMUM)

Monroe Elementary School IFD

PROJECT NUMBER:
 (28 SPACES MAXIMUM)

AE220046

P.O. NUMBER:

Wyandotte Public Schools

Sample collected by:

Zachary Fortin

if RUSH approved by:

Container Type & Quantity

REQUESTED TURNAROUND (BOX WITH TAT NEEDED)
 Default TAT Standard: 5 - 10 Business days
 RUSH: 1 Business day (verify with lab)
 RUSH: 2 Business days
 RUSH: 3 Business days
 RUSH SURCHARGE
 1 DAY=3X COST 2 DAY = 2X COST 3 DAY = 1.5X COST

Brighton ID #	Sample Description 35 Characters Limit	Sampling	
		Time	Date
1) 303233	Monroe-01 Hallway, Main Entrance, Hydration Station, Bottle Fill	12:02	11/5/2022
2) 34	Monroe-02 Staff Lounge, Kitchen Faucet	11:55	11/5/2022
3) 35	Monroe-03 Second Floor, Hallway Next to Room 25, Hydration Station, Bottle Fill	12:18	11/5/2022
4) 36	Monroe-04 East Entrance, Stairwell, Hydration station, Water Cooler	12:14	11/5/2022
5) 37	Monroe-05 Room 14, Faucet	12:07	11/5/2022
6)			
7)			
8)			
9)			
10)			

VOA'S (PRES)	VOA'S (UNPRES)	HDPE HNO ₃ FILTERED	HDPE HNO ₃ UNFILTERED	HDPE H ₂ SO ₄	HDPE NAOH	AMBER GLASS	AMBER GLASS (PRESERVE/NOT PRESERVE)	STERILIZED BACTERIA	MEOH Preserved: (Field or Lab Preserved)
			X						
			X						
			X						
			X						
			X						

Sample Matrix

Lead X

Sample received within holding time? yes no
 Temperature of samples °C ON 105
 pH verified in login? yes no
 Headspace/bubbles in VOAS? yes no n/a
 Sample containers and COC match? yes no

BILLING ADDRESS (IF REQUIRED)

Drinking Water:
 Fax to LCHD? yes no
 Chlorinated Water Supply? yes no
 MCL Failure yes no
 Client Notified (date/time/initials):

REPORT RESULTS TO:
 Arch Environmental Group

Attn: Jenna Sendra
PHONE:
FAX:
EMAIL: labs@archenvgroup.com

Analysis Requested/Method

BA PROJECT #: 8590X

ABBREVIATIONS FOR SAMPLE MATRIX
 S = Solid
 L = Liquid
 DW = Drinking H₂O
 WW = Wastewater
 O = Oil
 P = Wipe
 A = Air (Tedlar Bag)
 F = Filter
 T = Tube
 M = Misc
 GW = Groundwater
 SW = Surface Water

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	Zachary Fortin	KK - [Signature]	11/9/22	12:14	3	[Signature]	[Signature]	11/9/22	1:40
2					4				



BRIGHTON ANALYTICAL, LLC

QUALITY ASSURANCE/QUALITY
CONTROL

ICP-MS

METHOD 200.8/6020

REPRESENTATIVE BATCH PRECISION AND ACCURACY QUALITY CONTROL SUMMARY

Analysis Date: 11/15/2022 Standard ID: 101722 H2O Batch: 11/14/2022 B1
 Matrix Spike Lab ID: CS03242 Matrix: Total Analyst: LT

Metals	Matrix Spike - Precision *			Matrix Spike - Accuracy**				Miscellaneous***		
	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	1094	984	10.6	1000	109.4	98.4	0	<1	106.7	109.9

* Matrix spike precision range +/- 20% RPD

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

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

Comments: _____