



November 18, 2022

Mr. Bernie Bowers  
Operations Supervisor  
Wyandotte Public Schools  
639 Oak Street  
Wyandotte, Michigan 48192  
[Bowersb@wy.k12.mi.us](mailto:Bowersb@wy.k12.mi.us)

RE: **AEG Project # AE220046**  
Lead Drinking Water Sampling  
Garfield 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 Garfield 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.

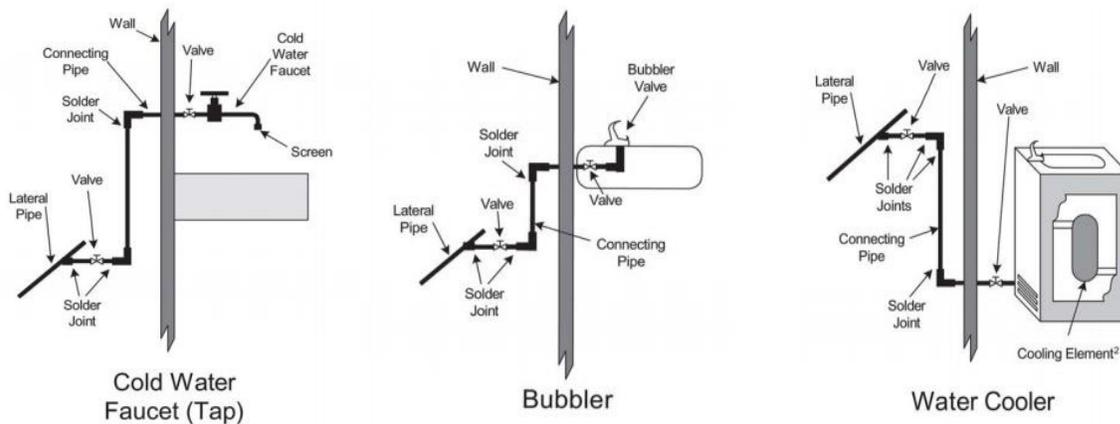
#### 4. *Brass Pipes, Faucets Fittings and Valves*

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

Garfield Elementary School									
Date of Sampling: November 5, 2022									
Sampler: Zachary Fortin									
Sample #	Location	Type <sup>1</sup>	Time Collected	District Lead Action Level (ug/L) <sup>2</sup>	Lead Results (ug/L)	Aerator Present Y/N	POU Filter Present Y/N	Filter Date/Color	Notes
Garfield-01	Hallway Outside of Kitchen, Hydration Station, Water Cooler	HS	9:35 AM	12	ND <sup>3</sup>	N	Y	Yellow	Initial First Draw
Garfield-02	Hallway Adjacent to Boiler Room, Water Cooler	WC	9:48 AM	12	ND	N	N	Unknown	Initial First Draw
Garfield-03	Staff Lounge, Kitchen Faucet	KF	9:53 AM	12	ND	Y	N	N/A	Initial First Draw
Garfield-04	Hallway Outside of Room 220, Hydration Station, Bottle Fill	HS	10:01 AM	12	ND	Y	Y	Red	Initial First Draw
Garfield-05	Hallway Across from Room 211, Water Cooler	WC	9:57 AM	12	ND	N	N	Unknown	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](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: Garfield 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 85909 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 09:35  
 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 # **85909**  
 BA Sample ID **CS03258**

Project Name: **Garfield Elementary School IFD**  
 Project Number: **AE220046 - WPS**  
 Sample ID: **Garfield-01 Hallway Outside Kitchen Hydration Station WC**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analyst	Analysis Date
<b>Drinking Water Metal Analysis</b>								
Total Lead (Drinking Water)	Not detected	ug/L	1	15	EPA 200.8 rev5.4	12:41	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 09:48  
 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 # **85909**  
 BA Sample ID **CS03259**

Project Name: **Garfield Elementary School IFD**  
 Project Number: **AE220046 - WPS**  
 Sample ID: **Garfield-02 Hallway Adjacent Booler Room Water Cooler**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analyst	Analysis Date
<b>Drinking Water Metal Analysis</b>								
Total Lead (Drinking Water)	Not detected	ug/L	1	15	EPA 200.8 rev5.4	12:44	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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 Brighton, Michigan 48114  
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 e-mail: bai-brighton@sbcglobal.net  
 EGLE Certified #9404  
 NELAC Accredited #176507

Sample Date/Time: 11/05/2022 09:53  
 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 # **85909**  
 BA Sample ID **CS03260**

Project Name: **Garfield Elementary School IFD**  
 Project Number: **AE220046 - WPS**  
 Sample ID: **Garfield-03 Staff Lounge Kitchen Faucet**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analyst	Analysis Date
<b>Drinking Water Metal Analysis</b>								
Total Lead (Drinking Water)	Not detected	ug/L	1	15	EPA 200.8 rev5.4	12:46	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 10:01  
 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 # **85909**  
 BA Sample ID **CS03261**

Project Name: **Garfield Elementary School IFD**  
 Project Number: **AE220046 - WPS**  
 Sample ID: **Garfield-04 Hallway Outside Room 220 Hydration Station BF**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analyst	Analysis Date
<b>Drinking Water Metal Analysis</b>								
Total Lead (Drinking Water)	Not detected	ug/L	1	15	EPA 200.8 rev5.4	12:48	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 09:57  
 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 # **85909**  
 BA Sample ID **CS03262**

Project Name: **Garfield Elementary School IFD**  
 Project Number: **AE220046 - WPS**  
 Sample ID: **Garfield-05 Hallway Across Room 211 Water Cooler**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analyst	Analysis Date
<b>Drinking Water Metal Analysis</b>								
Total Lead (Drinking Water)	Not detected	ug/L	1	15	EPA 200.8 rev5.4	12:51	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)

Garfield Elementary School IFD

**PROJECT NUMBER:**  
(26 SPACES MAXIMUM)

AE220046

**P.O. NUMBER:** Wyandotte Public Schools

**Sample collected by:**

Zachary Fortin

**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	Time	Date
1502258	Garfield-01 Hallway Outside of Kitchen, Hydration Station, Water Cooler	9:35	11/5/2022
2)	Garfield-02 Hallway Adjacent to Boiler Room, Water Cooler	9:48	11/5/2022
3)	Garfield-03 Staff Lounge, Kitchen Faucet	9:53	11/5/2022
4)	Garfield-04 Hallway Outside of Room 220, Hydration Station, Bottle Fill	10:01	11/5/2022
5)	Garfield-05 Hallway Across from Room 211, Water Cooler	9:57	11/5/2022
6)			
7)			
8)			
9)			
10)			

VOA'S (PRES)	VOA'S (UNPRES)	HDPE HNO <sub>3</sub> FILTERED	HDPE HNO <sub>3</sub> UNFILTERED	HDPE H2SO <sub>4</sub>	HDPE NAOH	AMBER GLASS	AMBER GLASS (PRESERVE/NOT PRESERVE)	STERILIZED BACTERIA	MEOH Preserved:	(F)ield or (L)ab Preserved
			X							DW
			X							DW
			X							DW
			X							DW
			X							DW
										DW
										DW
										DW
										DW
										DW

Sample received within holding time? yes  no   
 Temperature of samples °C: \_\_\_\_\_  
 pH verified in login? yes  no   
 Headspace/bubbles in VOA'S? yes  no   
 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): \_\_\_\_\_

## Analysis Requested/Method

BA PROJECT #: 05909  
 ABBREVIATIONS FOR SAMPLE MATRIX  
 S = Solid  
 L = Liquid  
 DW = Drinking H<sub>2</sub>O  
 WW = Wastewater  
 O = Oil  
 P = Wipe  
 A = Air (Tedlar Bag)  
 F = Filter  
 T = Tube  
 M = Misc  
 GW = Groundwater  
 SW = Surface Water

Trans. #	RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:	Trans. #	RELINQUISHED BY:	RECEIVED BY:	DATE:	TIME:
1	Zach Fortin	KL Divil	11/9/22	12:15	3	KL Divil	[Signature]	11/9/22	1:40
2					4				

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



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 B2

Matrix Spike Lab ID: CS03262

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	840	935	10.7	1000	84.0	93.5	0	<1	94.5	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: \_\_\_\_\_