



November 9, 2018

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

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

Dear Mr. Bowers:

Pursuant to the request of Wyandotte Public Schools, Arch Environmental Group, Inc. (AEG) collected three (3) representative first draw drinking water lead samples on October 13, 2018, at Garfield 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.

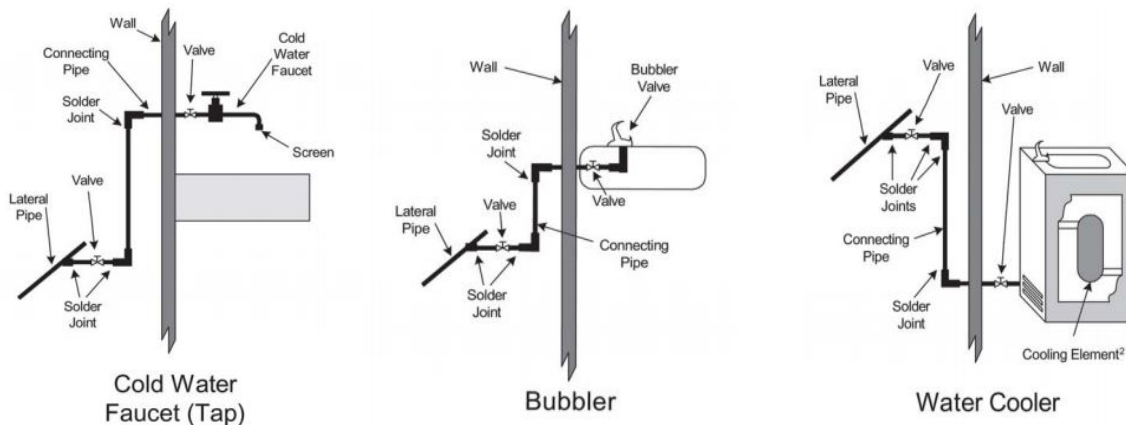
Lead enters drinking water:

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**

- Garfield-01: Receiving, Food Preparation Sink.
- Garfield-02: In Hallway, Right of Room 106, Bottle Fill.
- Garfield-03: Room 103, Faucet.

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*

Alec Staber

Attachments: Results Table  
Analytical Results & Chain of Custody



**Wyandotte Public Schools**  
**Lead Drinking Water Analysis**  
**Project Number: AE180812**

Garfield Elementary School							
Date of Sampling: 10/13/2018							
Sampler: Lindsey Eveleth							
Sample #	Location	Type <sup>1</sup>	Time Collected	Lead EPA Action Level (ug/L)	Lead Results (ug/L)	Aerator Present Y/N	Notes
Garfield-01	Receiving, Food Preparation Sink	KF	9:55 AM	15	3	Y	First Draw.
Garfield-02	In Hallway, Right of Room 106, Bottle Fill	BT	10:00 AM	15	ND <sup>3</sup>	N	First Draw. Water cooler was reviewed against the EPA Fact Sheet to determine that it is not lead lined.
Garfield-03	Room 103, Faucet	F	10:09 AM	15	2	Y	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-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: Garfield 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 53455 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 09:55  
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 # **53455**  
BA Sample ID **CI05040**

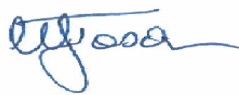
Project Name: **Garfield Elementary School IFD**  
Project Number: **AE180812-WPS**  
Sample ID: **Garfield-01 Food Prep Sink Receivin**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
<b>Drinking Water Metal Analysis</b>							
Total Lead (Drinking Water)	3	ug/L	1	15	EPA 200.8 rev5.4	15:47	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 10:09  
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 # **53455**  
BA Sample ID **CI05042**

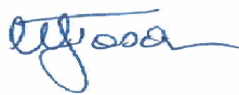
Project Name: **Garfield Elementary School IFD**  
Project Number: **AE180812-WPS**  
Sample ID: **Garfield-03 Rm103, Classroom Faucet**

Analyte Name	Result	Units	RL	MCL	Method Reference	Analysis Time	Analysis Date
<b>Drinking Water Metal Analysis</b>							
Total Lead (Drinking Water)	2	ug/L	1	15	EPA 200.8 rev5.4	16:02	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 #

53453

## ABBREVIATIONS FOR MATRIX

S = Solid  
L = Liquid  
DW = Drinking H<sub>2</sub>O  
O = Oil  
P = Wipe  
A = Air (Tedlar Bag)  
F = Filter  
T = Tube  
M = Misc.

## Analysis Requested/Method

PAGE 1 OF 1

## COMPANY/MAILING ADDRESS:

Arch Environmental  
Group

ATTN: Lauren Koroski

PHONE:

FAX OR EMAIL: lab@archenvgroup.com

Samples received within hold time? yes ☒ no ☐

Temperature of samples °C: ON ICE

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 H<sub>2</sub>O:

Fax to LCHD? yes ☐ no ☒

Chlorinated Water Supply? yes ☒ no ☐

AMT.: \_\_\_\_\_

MCL Failure: yes ☐ no ☐

Client Notified (date/time/initials): \_\_\_\_\_

## PROJECT NAME:

Garfield Elementary School IFD

## PROJECT #:

A2180812

## PO #: (PLEASE NOTE IF DIFFERENT BILLING ADDRESS)

Wyandotte Public Schools

## Sample collected by:

## Container Type & Quantity

## 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.

Brighton ID #

Sample Description

Date

Time

VOA'S (PRES) Y N N/A

HDPE UNPRESERVED

HDPE HNO<sub>3</sub>

HDPE H<sub>2</sub>SO<sub>4</sub>

HDPE NaOH

AMBER PRESERVED?

GLASS, NO PRESERVATIVE

STERILIZED BACTERIA

MEOH Preserved Y N

Sample Matrix

405040 Garfield-01 food prep sink receiving 10/13 0855

2) 41 Garfield-02 Bottles in hallway, right of 1006 1000

3) 42 Garfield-03 Room 103, classroom fence 1009

4)

5)

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			10/5/19	10:40	3				
2			10/5/19	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 B3
Matrix Spike Lab ID: CI05040	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	961	982	2.2	1000	95.8	97.9	3	<1	105.9	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: \_\_\_\_\_