May 30, 2024

Mr. Johnny Mills
Operations Manager
1617 JFK Blvd., Suite 580
Philadelphia, PA 19103

RE: Lead (Pb) in Water Testing (resample)
Freire Charter School Wilmington
201 W 14th Street, Wilmington, DE 19801
IEC Project # 2024.059.4B

Dear Mr. Mills:

Indoor Environmental Concepts, LLC (IEC) was retained by the Freire Charter Schools to perform an assessment and testing of the drinking water outlets servicing the Freire Charter School Wilmington for the presence of lead (Pb). The lead in water testing was performed pursuant to the regulations and guidance documents from Delaware's Division of Public Health and Delaware's Department of Education and the United States Environmental Protection Agency (EPA) protocols as recommended in their publication 3Ts for Reducing Lead in Drinking Water in Schools, Revised Technical Guidance. The EPA developed the 3Ts for Reducing Lead in Drinking Water in Schools, Revised Technical Guidance, which has been incorporated into this sampling protocol because the Agency is concerned about the potential for elevated lead levels in drinking water in schools.

Safe Drinking Water Compliance

The EPA recommends that schools collect 250 mL first-draw samples from water fountains, water bottle filler stations and potable water outlets for the analysis for lead (Pb). The EPA also recommends that these potable water outlets do not exceed 20 parts per billion (ppb) or 0.020 milligrams of lead per liter of water (mg/L). However, to guarantee that students have access to safe drinking water at Delaware schools, The action level used by the Delaware Codes is **7.5 parts per billion** (ppb) of lead. The action level of 7.5 ppb of lead or less was used in the interpretation of results for the samples collected and analyzed at the Freire Charter School Wilmington.

Lead Sampling Collection and Results

A trained technician collected samples from water outlets and the samples were sent to a certified laboratory for analysis. The samples were collected after an 8-to-18-hour stagnation period. All samples were taken before the facility opened and before any water was used by building occupants. Where practical and feasible, samples were first collected at drinking water outlets that were as close as possible to the building water main. Cold water lines were sampled when possible. All water samples were collected in laboratory supplied, pre-cleaned 250 milliliter (mL) bottles preserved with Nitric Acid

(HNO3). The bottles were labeled with a unique sample identification number and the sample location and time sampled were recorded on the chain of custody form. All samples were sealed immediately after collection and delivered to the laboratory for the analysis of lead content via ICP/MS by EPA Method 200.8. A copy of the laboratory analytical reports, certifications, and chain of custody forms can be found as attachments to this report.

After review of the results from the initial first-draw sampling performed by IEC April 5, 2024, all outlets with results that exceeded the 7.5 ppb action limit were resampled. First-draw re-sampling was performed by IEC at two (2) drinking water outlets on May 14, 2024. Of those outlets, sample 0514-1 collected from the main building ground level women's lavatory passed and sample 0514-2 main building ground level men's lavatory inside left failed.

In general, an ongoing flushing program should be implemented as a routine practice to improve the overall water quality at this facility. Flushing involves opening taps and letting the water run to remove water that has been standing in the interior pipes and/or the outlets. The flushing time can vary by the type of outlet being cleared. The degree to which flushing helps reduce lead levels can also vary depending upon the age and condition of the plumbing and the corrosiveness of the water. Flushing individual outlets immediately prior to use is recommended in conjunction with signage and flushing schedules. In addition, EPA recommends locating the faucet furthest away from the service line on each wing and floor of the building, opening the faucets , and let the water run for 10 minutes.

In summary, the assessment and testing performed indicate that the lead levels of the drinking water outlets servicing the school currently meet federal and State of Delaware guidelines, following the recommendations and provisions described herein.

Background

Historically, 15 ppb has been the EPA's stated action level, and an enforceable standard, for lead in drinking water under the EPA's Lead and Copper Rule regulations. It was also the stated level of action in the 2020 grant awarded to DPH and DOE. **Delaware has lowered the initial action level from 15 ppb to 7.5 ppb.**

Given the health effects of lead, EPA advocates that any school conducting sampling for lead make public any test results. In addition, such schools should identify activities they are pursuing to correct any lead problems. Advice, suggestions, and samples to assist in the public notification process is available from the EPA in their 3Ts for Reducing Lead in Drinking Water in Schools. This publication is available online on the EPA's website.

Sincerely:
Indoor Environmental Concepts, LLC

Michael P. Menz, CIH, CHMM
President
Attachments

IEC
Indoor Environmental Concepts, LLC

AC16900

Project Name: Freire Wilmington File #: 2024.059.4B

Laboratory: EMSL Analysis: Lead in Drinking Water – 200.8/6020A

Turnaround Time: 2 week

Collected by: Michael Menz Date: May 14, 2024

Transmitted by: Michael C Menz Date: 5/14/24 9:44AM

Received by: via Colleen Palladino Date: 5/14/24 9:45AM 5/14/24 9:45

mpm

Sample #	Location	Fixture Type	Time sampled
0514-1 ~~0504~~-01	Main building, ground level women's lavatory	sink	6:56AM
0514-2 ~~0504~~-02	Main building, ground level men's lavatory inside left	sink	7:08AM

Email results to:
labresults@indoorenvconcepts.com

Page 1 of 1

HNO_3 added @ 11AM 5/14 CP

(2) AD

EMSL Analytical, Inc.

200 Route 130, Cinnaminson, NJ, 08077
Telephone: 856-858-4800 Fax:856-786-5974
EMSL-CIN-01

EMSL Order ID: 012416900
LIMS Reference ID: AC16900
EMSL Customer ID: INDA25

Attention: Michael Menz
Indoor Environmental Concepts, LLC [INDA25]
117 N Black Horse Pike
Runnemede, NJ 08078
(856) 628-6020
mpmenz@indoorenvconcepts.com

Project Name: Freire Wilmington
Customer PO:
EMSL Sales Rep: Gary Perlmutter
Received: 05/14/2024 09:45
Reported: 05/29/2024 17:29

Analytical Results

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Analyst Initials	Prep /Analytical Method
Sample: 0514-1/Main building, ground level womens lavatory			**Lims Reference ID: AC16900-01**		**Matrix: Drinking Water**				**Sampled: 05/14/24 06:56:00**
Metals									
Lead	**2.55**		1	1.00	µg/L	05/15/24 14:06	05/17/24 21:08	LXK	EPA 200.8 (DA)/EPA 200.8
Sample: 0514-2/Main building, ground level mens lavatory inside left			**Lims Reference ID: AC16900-02**		**Matrix: Drinking Water**				**Sampled: 05/14/24 07:08:00**
Metals									
Lead	**23.7**		1	1.00	µg/L	05/15/24 14:06	05/17/24 21:09	LXK	EPA 200.8 (DA)/EPA 200.8

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Certified Analyses included in this Report

Analyte	Certifications
EPA 200.8 in Drinking Water	
Lead	NJDEP

List of Certifications

Code	Description	Number	Expires
PADEP	Pennsylvania Department of Environmental Protection	68-00367	11/30/2024
NYSDOH	New York State Department of Health	10872	04/01/2025
NJDEP	New Jersey Department of Environmental Protection	03036	06/30/2024
MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
CTDPH	Connecticut Department of Public Health	PH-0270	06/23/2024
California ELAP	California Water Boards	1877	06/30/2024
AIHA LAP	EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC-ELLAP Accredited	100194	01/01/2025
A2LA	A2LA Environmental Certificate	2845.01	07/31/2024

Please see the specific Field of Testing (FOT) on www.emsl.com <http://www.emsl.com> for a complete listing of parameters for which EMSL is certified.

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Received: 05/14/2024 09:45
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Notes and Definitions

Item	Definition
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
Q	Qualifier
RL	Reporting Limit
Wet	Sample is not dry weight corrected.

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.

Owen McKenna Laboratory Manager or other approved signatory

June 11, 2024

Mr. Johnny Mills
Operations Manager
1617 JFK Blvd., Suite 580
Philadelphia, PA 19103

RE: Lead (Pb) in Water Testing (resample)
Freire Charter School Wilmington
201 W 14th Street, Wilmington, DE 19801
IEC Project # 2024.059.4C

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(HNO3). The bottles were labeled with a unique sample identification number and the sample location and time sampled were recorded on the chain of custody form. All samples were sealed immediately after collection and delivered to the laboratory for the analysis of lead content via ICP/MS by EPA Method 200.8. A copy of the laboratory analytical reports, certifications, and chain of custody forms can be found as attachments to this report.

After review of the results from the first-draw re-sampling performed by IEC May 14, 2024, one outlet with results that exceeded the 7.5 ppb action limit was resampled. First-draw second re-sampling was performed by IEC at one (1) drinking water outlets on June 4, 2024. That sample, 0604-01, main building ground level men's lavatory inside left failed.

In general, an ongoing flushing program should be implemented as a routine practice to improve the overall water quality at this facility. Flushing involves opening taps and letting the water run to remove water that has been standing in the interior pipes and/or the outlets. The flushing time can vary by the type of outlet being cleared. The degree to which flushing helps reduce lead levels can also vary depending upon the age and condition of the plumbing and the corrosiveness of the water. Flushing individual outlets immediately prior to use is recommended in conjunction with signage and flushing schedules. In addition, EPA recommends locating the faucet furthest away from the service line on each wing and floor of the building, opening the faucets , and let the water run for 10 minutes.

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Sincerely:
Indoor Environmental Concepts, LLC

Michael P. Menz, CIH, CHMM
President
Attachments

AC18992

IEC
Indoor Environmental Concepts, LLC

Project Name: Freire Wilmington File #: 2024.059.4C

Laboratory: EMSL Analysis: Lead in Drinking Water – 200.8/6020A

Turnaround Time: 1 week

Collected by: Michael Menz (mpm) Date: June 4, 2024

Transmitted by: [signature] Date: 6/4/24 10:52 AM

Received by: Colleen Palladino Date: 6/4/24 10:55
6/4/24 10:55

1 HNO3 added @ 5:15 PM 6/4 CP

Sample #	Location	Fixture Type	Time sampled
0604-01	Main building, ground level men's lavatory inside left	sink	7:04 AM

Email results to:
labresults@indoorenvconcepts.com

Page 1 of 1

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EMSL Order ID: 012418992
LIMS Reference ID: AC18992
EMSL Customer ID: INDA25

Attention: Michael Menz
Indoor Environmental Concepts, LLC [INDA25]
117 N Black Horse Pike
Runnemede, NJ 08078
(856) 628-6020
mpmenz@indoorenvconcepts.com

Project Name: 2024.056.4C / Freire Wilmington
Customer PO:
EMSL Sales Rep: Gary Perlmutter
Received: 06/04/2024 10:55
Reported: 06/11/2024 12:47

Analytical Results

Analyte	Result	Q	DF	RL	Units	Prepared Date/Time	Analyzed Date/Time	Analyst Initials	Prep /Analytical Method
Sample: 0604-01/Main Building, Ground Level Men's Lavatory Inside Left Sink			**Lims Reference ID: AC18992-01**		**Matrix: Drinking Water**				**Sampled: 06/04/24 10:55:00**
Metals									
Lead	**8.00**		1	1.00	µg/L	06/04/24 10:55	06/06/24 22:04	LXK	EPA 200.8 (DA)/EPA 200.8

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MADEP	Massachusetts Department of Environmental Protection	M-NJ337	06/30/2024
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