

HORIZON ENVIRONMENTAL GROUP, INC.

P.O. Box 316
Thorofare, NJ 08086

Phone: 856-848-0800
Fax: 856-848-0838

January 15, 2022

Mr. John Swanson
Paulsboro Board of Education
662 North Delaware Street
Paulsboro, NJ 08066

Reference: Lead in Water Testing at Loudenslager Elementary School (First Draw Samples - 211031)

Dear Mr. Swanson:

Pursuant to your request, collection and analysis of seventeen (17) first draw water samples from the domestic water supply system at the Loudenslager Elementary School facility have been completed. In accordance with applicable New Jersey guidelines, the samples were collected in the morning on Sunday, October 31, 2021, by personnel from Horizon Environmental Group, Inc., and submitted for analysis for the presence of lead using inductively coupled plasma mass spectrometry (ICP-MS) in accordance with USEPA Method 200.8. The results of the analyses of the samples are as follows:

Sample No.	Location	Lead Concentration ($\mu\text{g/L}$)	Reporting Limit ($\mu\text{g/L}$)
L-DW-01	Water Inlet Room - Gate Valve	98.6	1.00
L-DW-14	APR - Sink #1	2.77	1.00
L-DW-16	APR - Sink #2	2.06	1.00
L-DW-12	Nurse's Office - Sink	ND	1.00
L-DW-17A	Hall near Room 14 (Filler)	ND	1.00
L-DW-17B	Hall near Room 14 (Bubbler)	ND	1.00
L-DW-03	Teacher's Lounge - Sink	1.34	1.00
L-DW-04A	Hall near Room 6 (Filler)	ND	1.00
L-DW-04B	Hall near Room 6 (Bubbler)	ND	1.00
L-DW-19A	Hall near Room 26 (Filler)	ND	1.00
L-DW-19B	Hall near Room 26 (Bubbler)	ND	1.00
L-DW-07	Room 9 - Sink	69.3	1.00
L-DW-09	Room 10 - Sink	7.10	1.00
L-DW-10	Room 11 - Fountain	5.62	1.00
L-DW-05B	Hall near Room 2 (Cooler)	ND	1.00
L-DW-18B	Hall near Room 22 (Cooler)	ND	1.00
211031-B-BLANK	BLANK	ND	1.00

Note: "ND" equals none detected; " $\mu\text{g/L}$ " equals micrograms per liter which is equivalent to parts per billion (ppb)

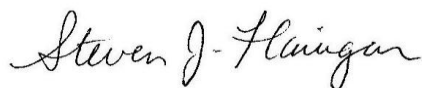
The following samples exceeded the "action level" of 15 µg/L (ppb) established by the United States Environmental Protection Agency and adopted by the State of New Jersey.

Sample No.	Location	Lead Concentration (µg/L)	Reporting Limit (µg/L)
L-DW-01	Water Inlet Room - Gate Valve	98.6	1.00
L-DW-07	Room 9 - Sink	69.3	1.00

The "action level" of 15 µg/L (ppb) does not necessarily signal a violation, but would trigger additional monitoring, maintenance, treatment and/or mitigation requirements. It is our understanding that the fixture in the water inlet room will no longer be allowed to be used for potable water. The fixture in room 9 was taken out of service and was not used until a "flush" sample was collected from it. Regarding the fixtures where lead was detected, but at a level below the action level, it is recommended that those fixtures be flushed periodically.

All laboratory analysis was performed by the trained staff at EMSL Analytical, Inc. in Cinnaminson, New Jersey and a copy of the analysis document is attached. If you have any questions or need more information, please do not hesitate to contact us at (856) 848-0800.

Sincerely,
HORIZON ENVIRONMENTAL GROUP, INC.



Steven J. Flanigan
Vice President



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 303-2500 Fax: (856) 858-4571 Email: EnvChemistry2@emsl.com

Attn: **David Flanigan**
Horizon Environmental Group, Inc.
P.O. Box 316
Thorofare, NJ 08086

11/8/2021

Phone: (609) 221-4660

Fax: (856) 848-0838

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 11/1/2021. The results are tabulated on the attached data pages for the following client designated project:

94015-65/Loundenslager ES

The reference number for these samples is EMSL Order #012112576. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Approved By:

Phillip Worby, Environmental Chemistry
Laboratory Director



The test results contained within this report meet the requirements of NELAP and/or the specific certification program that is applicable, unless otherwise noted.

NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, CA ELAP 1877

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the NELAP, unless specifically indicated. All results for soil samples are reported on a dry weight basis, unless otherwise noted. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856) 303-2500 / (856) 858-4571

<http://www.EMSL.com>EnvChemistry2@emsl.com

EMSL Order: 012112576

CustomerID: MDS50

CustomerPO:

ProjectID:

Attn: **David Flanigan**
Horizon Environmental Group, Inc.
P.O. Box 316
Thorofare, NJ 08086

Phone: (609) 221-4660
 Fax: (856) 848-0838
 Received: 11/1/2021 02:50 PM

Project: 94015-65/Loundenslager ES

Analytical Results

Client Sample Description L-DW-01
 Water Inlet Room - Gate Valve
Collected: 10/31/2021
 9:50:00 AM
Lab ID: 012112576-0001

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	98.6	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 22:43

Client Sample Description L-DW-14
 APR - Sink #1
Collected: 10/31/2021
 9:53:00 AM
Lab ID: 012112576-0002

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	2.77	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 22:51

Client Sample Description L-DW-16
 APR - Sink #2
Collected: 10/31/2021
 9:53:00 AM
Lab ID: 012112576-0003

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	2.06	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 22:52

Client Sample Description L-DW-12
 Nurse's Office - Sink
Collected: 10/31/2021
 9:55:00 AM
Lab ID: 012112576-0004

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	ND	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 22:54

Client Sample Description L-DW-17A
 Hall Near Room 14 (filler)
Collected: 10/31/2021
 9:56:00 AM
Lab ID: 012112576-0005

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	ND	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 22:55

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EMSL Order: 012112576

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Thorofare, NJ 08086

Phone: (609) 221-4660
 Fax: (856) 848-0838
 Received: 11/1/2021 02:50 PM

Project: 94015-65/Loundenslager ES

Analytical Results

Client Sample Description L-DW-17B
 Hall Near Room 14 (cooler)
Collected: 10/31/2021 9:56:00 AM
Lab ID: 012112576-0006

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	ND	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 22:57

Client Sample Description L-DW-03
 Teacher's Lounge - Sink
Collected: 10/31/2021 10:00:00 AM
Lab ID: 012112576-0007

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	1.34	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 22:58

Client Sample Description L-DW-04A
 Hall Near Room 6 (filler)
Collected: 10/31/2021 10:01:00 AM
Lab ID: 012112576-0008

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	ND	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 23:00

Client Sample Description L-DW-04B
 Hall Near Room 6 (cooler)
Collected: 10/31/2021 10:01:00 AM
Lab ID: 012112576-0009

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	ND	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 23:01

Client Sample Description L-DW-19A
 Hall Near Room 26 (filler)
Collected: 10/31/2021 10:04:00 AM
Lab ID: 012112576-0010

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	ND	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 23:02

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EMSL Order: 012112576

CustomerID: MDS50

CustomerPO:

ProjectID:

Attn: **David Flanigan**
Horizon Environmental Group, Inc.
P.O. Box 316
Thorofare, NJ 08086

Phone: (609) 221-4660
 Fax: (856) 848-0838
 Received: 11/1/2021 02:50 PM

Project: 94015-65/Loundenslager ES

Analytical Results

Client Sample Description L-DW-19B **Collected:** 10/31/2021 **Lab ID:** 012112576-0011
 Hall Near Room 26 (cooler) 10:04:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	ND	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 23:04

Client Sample Description L-DW-07 **Collected:** 10/31/2021 **Lab ID:** 012112576-0012
 Room 9 - Sink 10:06:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	69.3	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 23:11

Client Sample Description L-DW-09 **Collected:** 10/31/2021 **Lab ID:** 012112576-0013
 Room 10 - Sink 10:08:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	7.10	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 23:13

Client Sample Description L-DW-10 **Collected:** 10/31/2021 **Lab ID:** 012112576-0014
 Room 11- Fountain 10:09:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	5.62	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 23:14

Client Sample Description L-DW-05B **Collected:** 10/31/2021 **Lab ID:** 012112576-0015
 Hall Near Room 2 (cooler) 10:11:00 AM

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	ND	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 23:16

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856) 303-2500 / (856) 858-4571

<http://www.EMSL.com>EnvChemistry2@emsl.com

EMSL Order: 012112576

CustomerID: MDS50

CustomerPO:

ProjectID:

Attn: **David Flanigan**
Horizon Environmental Group, Inc.
P.O. Box 316
Thorofare, NJ 08086

Phone: (609) 221-4660
Fax: (856) 848-0838
Received: 11/1/2021 02:50 PM

Project: 94015-65/Loundenslager ES

Analytical Results

Client Sample Description L-DW-18B
Hall Near Room 22 (cooler)
Collected: 10/31/2021
10:13:00 AM
Lab ID: 012112576-0016

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	ND	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 23:17

Client Sample Description 211031-L-BLANK
BLANK
Collected: 10/31/2021
10:15:00 AM
Lab ID: 012112576-0017

Method	Parameter	Result	RL Units	Prep Date & Analyst	Analysis Date & Analyst
METALS					
200.8	Lead	ND	1.00 µg/L	11/4/2021 KB	11/4/2021 KB 23:19

Definitions:

MDL - method detection limit

J - Result was below the reporting limit, but at or above the MDL

ND - indicates that the analyte was not detected at the reporting limit

RL - Reporting Limit (Analytical)

D - Dilution Sample required a dilution which was used to calculate final results



Lead (Pb) Chain of Custody

EMSL Order ID (Lab Use Only):

012112576

Cinnaminson, NJ 08077

PHONE: 1-800-220-3675

FAX: (856) 786-5974

Company: Horizon Environmental Group, Inc.		EMSL-Bill to: <input type="checkbox"/> Different <input checked="" type="checkbox"/> Same If Bill to is Different note instructions in Comments**	
Street: P. O. Box 316		Third Party Billing requires written authorization from third party	
City: Thorofare	State/Province: NJ	Zip/Postal Code: 08086	Country: US
Report To (Name): David Flanigan		Telephone #: 856-848-0800	
Email Address: horizonenvgroup@gmail.com		Fax #: 856-848-0838	Purchase Order:
Project Name/Number: 94015-65 / Loudenslager ES		Please Provide Results: <input type="checkbox"/> FAX <input checked="" type="checkbox"/> E-mail <input type="checkbox"/> Mail	
U.S. State Samples Taken: NJ		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input checked="" type="checkbox"/> 2 Week			
*Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide			
Matrix	Method	Instrument	Reporting Limit
Chips <input type="checkbox"/> % by wt. <input type="checkbox"/> mg/cm ² <input type="checkbox"/> ppm	SW846-7000B	Flame Atomic Absorption	0.01%
Air	NIOSH 7082	Flame Atomic Absorption	4 µg/filter
	NIOSH 7105	Graphite Furnace AA	0.03 µg/filter
	NIOSH 7300 modified	ICP-AES/ICP-MS	0.5 µg/filter
Wipe* <input type="checkbox"/> ASTM <input type="checkbox"/> non ASTM <input type="checkbox"/> *If no box is checked, non-ASTM Wipe is assumed	SW846-7000B	Flame Atomic Absorption	10 µg/wipe
	SW846-6010B or C	ICP-AES	1.0 µg/wipe
	SW846-7000B/7010	Graphite Furnace AA	0.075 µg/wipe
TCLP	SW846-1311/7000B/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)
	SW846-1131/SW846-6010B or C	ICP-AES	0.1 mg/L (ppm)
Soil	SW846-7000B	Flame Atomic Absorption	40 mg/kg (ppm)
	SW846-7010	Graphite Furnace AA	0.3 mg/kg (ppm)
	SW846-6010B or C	ICP-AES	2 mg/kg (ppm)
Wastewater Unpreserved <input type="checkbox"/> Preserved with HNO ₃ pH < 2 <input type="checkbox"/>	SM3111B/SW846-7000B	Flame Atomic Absorption	0.4 mg/L (ppm)
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)
	EPA 200.7	ICP-AES	0.020 mg/L (ppm)
Drinking Water Unpreserved <input type="checkbox"/> Preserved with HNO ₃ pH < 2 <input checked="" type="checkbox"/>	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)
	EPA 200.8	ICP-MS	0.001 mg/L (ppm)
TSP/SPM Filter	40 CFR Part 50	ICP-AES	12 µg/filter
	40 CFR Part 50	Graphite Furnace AA	3.6 µg/filter
Other:			
Name of Sampler: SFLANIGAN / DFLANIGAN		Signature of Sampler: <i>Steve Flanigan</i>	
Sample #	Location	Volume/Area	Date/Time Sampled
1	L-DW-01	Water Inlet Room - Gate Valve	10/31/21 0950
2	L-DW-14	APR - Sink #1	0953
3	L-DW-16	APR - Sink #2	0953
4	L-DW-12	Nurse's Office - Sink	0955
5	L-DW-17A	Hall near Room 14 (Fluor)	0956
Client Sample #'s		Total # of Samples: 17	
Relinquished (Client): <i>Steve Flanigan</i>	Date: 11/1/2021	Time: 2:40 pm	
Received (Lab): <i>TH</i>	Date: 11/1/21	Time: 2:50	
Comments:			

**LEAD (Pb) CHAIN OF CUSTODY****EMSL ORDER ID** (Lab Use Only):

012112576

EMSL Analytical, Inc.
200 Route 130 North

Cinnaminson, NJ 08077

PHONE: 1-800-220-3675

FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Location	Volume/Area	Date/Time Sampled
6	L-DW-17B	Hallway Room 14 (CLOSET)	10/31/21 0956
7	L-DW-03	TEACHERS LOUNGE-SINK	1000
8	L-DW-04A	Hallway Room 6 (FLOOR)	1001
9	L-DW-04B	Hallway Room 6 (CLOSET)	1001
10	L-DW-19A	Hallway Room 26 (FLOOR)	1004
11	L-DW-19B	Hallway Room 26 (CLOSET)	1004
12	L-DW-07	Room 9 - SINK	1006
13	L-DW-09	Room 10 - SINK	1008
14	L-DW-10	Room 11 - FOUNTAIN	1009
15	L-DW-05B	Hallway Room 2 (CLOSET)	1011
16	L-DW-18B	Hallway Room 22 (CLOSET)	1013
	211031-L-BLANK ⑧		
17	211031-L-BLANK	BLANK	1015
Comments/Special Instructions:			

