Effective and Economical Environmental Solutions

Lead in Drinking Water Sampling
Per amendments to N.J.A.C 6A:26 Educational Facilities
Harrington Park School District
191 Harrington Ave
Harrington Park NJ 07640

Karl Environmental Group Project #:22-0579

May 16, 2022

Prepared for:

Mr. Bryan Jursca
Business Administrator
Harrington Park School District
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Mr. Bryan Jursca
Business Administrator
Harrington Park School District
191 Harriot Ave
Harrington Park NJ 07640

Re: District Wide Lead in Drinking Water Sampling
Per amendments to N.J.A.C 6A:26 Educational Facilities
Harrington Park School District
191 Harriot Ave
Harrington Park NJ 07640
Karl Environmental Group Project #: 22-0579

Dear Mr. Bryan Jursca:

Thank you for selecting Karl Environmental Group ("Karl") for this project. This report details the methods and findings of the lead in drinking water services as per New Jersey state regulations (amendments to N.J.A.C 6A:26 Educational Facilities) performed within the Harrington Park School District building (the "Facilities"), on April 20th, 2022.

1.0 PROJECT BACKGROUND

Karl Environmental was contacted by Mr. Jursca of the Harrington Park School District (the "Client") to perform lead in drinking water sampling to determine the lead content of drinking water from sources at one (1) school building (the "Facility"). Additionally, as per State regulations, Karl Environmental Group was contracted to update the Quality Assurance Project Plan (QAPP).

The purpose of lead in drinking water sampling is to determine if any sampled drinking water sources exhibit lead levels exceeding the Regulatory Action Level of 15 parts per billion (ppb). Drinking water collection points included any water sources from which a student, staff, or faculty may reasonably drink or from which the water may be used for cooking or beverage preparation, including, but not limited to, water coolers/bubblers, kitchen faucets, Nurse's Office faucets, and Faculty/Staff lounges.

2.0 LEAD IN DRINKING WATER

Lead is a toxic substance that can be harmful to human health. As compared to adults, children are more susceptible to the detrimental health effects of lead, as their nervous systems are not yet fully developed. Exposure to lead can occur in a variety of ways including through food, soil, deteriorating lead-based paint, and drinking water. Lead can leach into drinking water from plumbing materials such as pipes and solder, as well as brass plumbing fixtures. For this investigation, planning, preparation, methodology, sampling, and follow-up actions were conducted according to the technical guidance provided by New Jersey following the adoption of amendments to N.J.A.C. 6A:26: Educational Facilities, requiring the sampling of drinking water for lead in schools.

3.0 DRINKING WATER SAMPLING METHODOLOGY

Karl collected drinking water samples from water outlets throughout the Facility. At each collection point, Karl Environmental filled a 250 milliliter (mL) wide-mouth high density polyethylene (HDPE) sample collection bottle from the selected water source. Samples were collected after the water in each building had not been used for at least 8 hours, but not more than 48 hours. Samples were preserved using concentrated Nitric Acid (HNO_3). The initial sample at each collection point represents the first draw sample. The first draw sample is representative of the water from the end point of the water source (i.e., the bubbler or tap).

A field blank using lead-free laboratory reagent water was also collected at each Facility during the sampling event to rule out contamination of samples during the collection and transportation process. All samples were recorded under proper chain of custody and couriered to Suburban Testing Labs (Suburban), a New Jersey certified laboratory (NJ Lab ID #PA081) located in Reading, Pennsylvania for analysis by EPA method 200.8, NJ DOE.

During the initial sampling event, Karl Environmental Group collected the following number of samples at the Facility:

Harrington Park School District

- Forty-eight (48) First Draw Samples
- Two (2) field blanks

4.0 DRINKING WATER ANALYSIS RESULTS

The analytical lead in drinking water results for each first draw sample are listed in Table 1, below:

Table 1: Harrington Park School District– April 20, 2022

Sample I.D.	Type of Collection Point	Lead Concentration (ppb)	Above Regulatory Action Level?
HP-BLANK	Field blank	< 1.00	No
HP-DW-APR-1	Apr Kitchen	< 1.00	No
HP-DW-CL-21	Water Fountain	< 1.00	No
HP-DW-CL-24	Water Fountain	10.4	No
HP-DW-CL-27	Water Fountain	< 1.00	No
HP-DW-FAC	Faculty Water Fountain	< 1.00	No
DP-DW-NURSE-L	Left Sink Nurse's office	< 1.00	No
HP-DW-NURSE-R	Right Sink Nurse's office	< 1.00	No
HP-DW-CL-48-HALL-1	Left Water Fountain	< 1.00	No
HP-DW-CL-HALL 45-2	Right Hallway Water Fountain	< 1.00	No
HP-DW-MOD-1	Left Modular	< 1.00	No
HP-DW-MOD-2	Right Modular	< 1.00	No
HP-DW-CL-76-1	Left Water Fountain	3.51	No
HP-DW-CL-76-2	Right Water Fountain	3.12	No
HP-DW-GYM-FOY-1	Left Water Fountain	4.45	No
HP-DW-GYM-FOY-2	Right Water Fountain	8.87	No
HP-DW-GYM-ENT-1	Left Water Fountain	1.80	No
HP-DW-GYM-ENT-2	Water Fountain	2.26	No
HP-DW-GYM-ENT-3	Water Fountain	< 1.00	No

Sample I.D.	Type of Collection Point	Lead Concentration (ppb)	Above Regulatory Action Level?
HP-DW-APR-2	Hall room 2	< 1.00	No
HP-DW-HALL RM 7-R	Water Fountain	< 1.00	No
HP-DW-HALL RM 11-R	Water Fountain	< 1.00	No
HP-CS-VICE PRINCIPLE	Sink	3.02	No
HP-CS-RM 22	Sink	1.12	No
HP-CS-RM 20	Sink	8.76	No
HP-DW-HALL RM 24	Water Fountain	< 1.00	No
HP-CS-CL-47	Sink	8.75	No
HP-CS-CL-46	Sink	39.1	Yes
HP-CS-CL-45	Sink	10.0	No
HP-CS-CL-44	Sink	21.3	Yes
HP-DW-CL-62	Water Fountain	1.75	No
HP-CS-CL-62	Sink	1.50	No
HP-DW-CL-54	Water Fountain	2.20	No
HP-DW-CL-53	Water Fountain	1.92	No
DP-DW-CL-52	Water Fountain	2.39	No
HP-DW-CL-51	Water Fountain	3.26	No
HP-DW-CL-48	Sink	37.1	Yes
HP-DW-CL-23	Water Fountain	< 1.00	No
HP-DW-CL-25	Water Fountain	4.87	No
HP-DW-CL-26	Water Fountain	1.43	No
HP-DW-HALL-25	Water Fountain	< 1.00	No
HP-DW-CL-29	Water Fountain	< 1.00	No
HP-DW-CL-28	Water Fountain	< 1.00	No
HP-CS-CL-60	Sink	2.21	No
HP-DW-CL-60	Water Fountain	3.20	No
HP-CS-CL-41	Sink	20.7	Yes
HP-CS-CL-38	Sink	6.65	No
HP-DW-CL-38	Water Fountain	4.68	No
HP-DW-CL-35	Water Fountain	2.91	No
HP-MOD-BLANK	Field blank	<1.00	No

Results above reguatory action level

All laboratory analytical results were compared to the Regulatory Action Level of 15 ppb for lead. Analysis of lead in the first draw drinking water samples indicated that at the time of the sampling event, four (4) samples collected from the Harrington Park School were above the Regulatory Action Level, denoted in orange highlight above.

The four (4) outlets that were above the regulatory action level of 15 ppb for lead have been shut off and been labeled as "Only for handwashing" if turned on in the future.

5.0 CONCLUSIONS & RECOMMENDATIONS

Following the lead in drinking water sampling event conducted on April 20, 2022, four (4) outlets, which are denoted in orange highlight within the above table, were above the Regulatory Action Level of 15 ppb. At the conclusion of the lead in drinking water services, Karl Environmental offers the following recommendations at this time:

- The District should perform second draw flush sampling of each outlet that exceeded the regulatory action level of 15 ppb to determine the source of lead.
- Each outlet above the regulatory action level of 15 ppb should be taken out of service until results under the action level are achieved or placing a "Hand Wash Only" sign above each failing outlet.
- Continue to monitor lead in drinking water levels as part of a regular sampling and maintenance plan, as per New Jersey State regulations. Amendments will require district-wide sampling every three (3) years.
- In the interim, when drinking water outlets are replaced/added, or the plumbing is disturbed, sampling of the impacted outlets should be completed to determine if lead levels were affected.
- Implement an aerator cleaning maintenance program to prevent the build-up of debris behind the screen which may contribute to elevated lead levels.
- Enter all filter maintenance, aerator maintenance, plumbing repairs/changes and any other pertinant information into the Field Log Book for each Facility.
- Use only cold water for food and beverage preparation. Hot water is more likely to contribute to the corrosion of plumbing materials and thefore contain a greater level of contaminants from the plumbing system.

6.0 LIMITATIONS

This investigation focused on lead in drinking water only. No other heavy metals or additional contaminants were sampled for or analyzed. Lead concentrations can change as water continues to move through the water system. Each sample was a grab sample and represents lead concentrations only at the specific time of collection and may vary based on the water usage in the facility. Interpretation of these results is only valid if the facility is serviced by a municipal water supplier or water utility.

This lead sampling event was in response to the amendments to N.J.A.C. 6A:26, Educational Facilities dated July 13, 2016, which requires testing for lead in the drinking water of public and charter school districts every three (3) years.

7.0 CLOSING

Thank you for using Karl Environmental to assist you with this project. Please do not hesitate to call if you have any questions relating to this report or for any other environmental health and safety concerns.

Respectfully submitted,
Karl Environmental Group

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HARRINGTON PARK
SCHOOL DISTRICT
BOARD OF EDUCATION

May 17, 2022

Harrington Park School
191 Harriot Avenue
Harrington Park, NJ 07640

Our school system is committed to protecting student, teacher, and staff health. To protect our community and be in compliance with the Department of Education regulations, our school's drinking water was tested for lead.

In accordance with the Department of Education regulations, immediate remedial measures will be implemented for any drinking water outlet with a result greater than the action level of 15 µg/l (parts per billion [ppb]). This includes turning off the outlet unless it is determined the location must remain on for non-drinking purposes. In these cases, a "HANDWASHING ONLY" sign will be posted.

Testing Results

Following instructions given in technical guidance developed by the New Jersey Department of Environmental Protection, we identified and tested all drinking water outlets. Of the 33 drinking outlet samples taken, NONE tested above the lead action level established by the US Environmental Protection Agency for lead in drinking water (15 µg/l [ppb]).

Classroom sinks were also tested and the table below identifies 4 sink outlets out of 15 that tested above the 15 µg/l for lead. Because these outlets are not used for drinking purposes, "HANDWASHING ONLY" signs have been posted at all sink locations throughout the school, regardless of the test results.

Sample Location	First Draw Result in µg/l (ppb)	Remedial Action
Sink – Room 41	20.7	Posted signage "HANDWASHING ONLY"
Sink – Room 44	21.3	Posted signage "HANDWASHING ONLY"
Sink – Room 46	39.1	Posted signage "HANDWASHING ONLY"
Sink – Room 48	37.1	Posted signage "HANDWASHING ONLY"

For More Information

A copy of the test results has been posted to our website at hpsd.org.

For more information on reducing lead exposure around your home and the health effects of lead, visit EPA's Web site at epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

Sincerely,

Bryan Jursca
Business Administrator