Effective and Economical
Environmental Solutions

Lead in Drinking Water Sampling
Per amendments to N.J.A.C 6A:26 Educational Facilities
Northern Hills Academy
18 Gail Court
Sparta, NJ 07871
Karl Environmental Group Project #: 25-0594

April 11, 2025

Prepared for:

Joseph Neal
Facilities Manager
Northern Hills Academy
18 Gail Court
Sparta, NJ 07871

Prepared by:

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April 11, 2025

Joseph Neal
Facilities Manager
Northern Hills Academy
18 Gail Court
Sparta, NJ 07871

Re: Lead in Drinking Water Sampling
Per amendments to N.J.A.C 6A:26 Educational Facilities
Northern Hills Academy
18 Gail Court
Sparta, NJ 07871
Karl Environmental Group Project #: 25-0594

Dear Mr. Neal,

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 Northern Hills Academy on April 4, 2025.

PROJECT SUMMARY
All the outlets sampled on April 4, 2025, were below the regulatory action level of 15 ppb.

1.0 PROJECT BACKGROUND

Karl Environmental was contracted by Joseph Neal, Facilities Manager, of Northern Hills Academy (the "Client"), to perform lead in drinking water sampling to determine the lead content of drinking water from 18 Gail Court (the "Facility"), on April 4, 2025.

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 from or which the water may be used for cooking or beverage preparation, including, but not limited to, water coolers, bottle fillers, bubblers, and kitchen/nurses/classroom faucets.

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 nine (9) 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 Eurofins Built Environment (iATL), a New Jersey certified laboratory located in Mount Laurel, New Jersey for analysis by EPA method 200.8, NJ DOE.

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

Northern Hills Academy
Eight (8) samples
One (1) Field Blank

4.0 DRINKING WATER ANALYSIS RESULTS

The analytical lead in drinking water results for each first draw sample are listed in the table below:

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, none of the samples were above the Regulatory Action Level.

Sample I.D.	Type of Collection Point	Lead Concentration (ppb)	Above Regulatory Action Level?
NHA-Blank	Blank	<1.00	No
NHA-SK-120	Room 120 Sink	<1.00	No
NHA-SK-105	Room 105 Sink	1.10	No
NHA-SK-103	Room 103 Sink	<1.00	No
NHA-SK-108	Room 108 Sink	<1.00	No
NHA-SK-102	Room 102 Sink	<1.00	No
NHA-SK-111	Room 111 Sink	<1.00	No
NHA-SK-116-A	Room 116A Sink	<1.00	No
NHA-SK-116-C	Room 116C Sink	<1.00	No

5.0 CONCLUSIONS & RECOMMENDATIONS

Following the lead in drinking water sampling event conducted on April 4, 2025, all outlets were below 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:

- 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 must 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 Group.
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

Barry M. Hunsberger

Barry M. Hunsberger
Environmental Consultant
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Attachment A:

Analytical Lab Results

eurofins | Built Environment Testing
iATL

9000 Commerce Parkway Suite B
Mt. Laurel, New Jersey 08054
Telephone: 856-231-9449
Email: customerservice@iatl.com

CERTIFICATE OF ANALYSIS

Client: Karl Environmental Group
20 Lauck Road
Mohnton PA 19540

Client: KAR387

Report Date: 4/8/2025
Report No.: 711727 - Lead Water
Project: Northern Hills Academy
Project No.: 25-0594

LEAD WATER SAMPLE ANALYSIS SUMMARY

Lab No.:7833659 **Client No.:**NHA-Blank	**Location:**Blank * Sample acidified to pH <2.	**Result(ppb):**<1.00
Lab No.:7833660 **Client No.:**NHA-SK-120	**Location:**RM 120 Sink * Sample acidified to pH <2.	**Result(ppb):**<1.00
Lab No.:7833661 **Client No.:**NHA-SK-105	**Location:**RM 105 Sink * Sample acidified to pH <2.	**Result(ppb):**1.10
Lab No.:7833662 **Client No.:**NHA-SK-103	**Location:**RM 103 Sink * Sample acidified to pH <2.	**Result(ppb):**<1.00
Lab No.:7833663 **Client No.:**NHA-SK-108	**Location:**RM 108 Sink * Sample acidified to pH <2.	**Result(ppb):**<1.00
Lab No.:7833664 **Client No.:**NHA-SK-102	**Location:**RM 102 Sink * Sample acidified to pH <2.	**Result(ppb):**<1.00
Lab No.:7833665 **Client No.:**NHA-SK-111	**Location:**RM 111 Sink * Sample acidified to pH <2.	**Result(ppb):**<1.00
Lab No.:7833666 **Client No.:**NHA-116-A	**Location:**Room 116 A Sink * Sample acidified to pH <2.	**Result(ppb):**<1.00
Lab No.:7833667 **Client No.:**NHA-SK-C	**Location:**Room 116 C Sink * Sample acidified to pH <2.	**Result(ppb):**<1.00

Please refer to the Appendix of this report for further information regarding your analysis.

Date Received: 4/4/2025
Date Analyzed: 04/08/2025
Signature: Chad Shaffer
Analyst: Chad Shaffer

Approved By: Frank E. Ehrenfeld, III
Laboratory Director

eurofins | Built Environment Testing
iATL

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Client: KAR387

Report Date: 4/8/2025
Report No.: 711727 - Lead Water
Project: Northern Hills Academy
Project No.: 25-0594

Appendix to Analytical Report:

Customer Contact: Mike Karl
Analysis: AAS-GF - ASTM D3559-15D

This appendix seeks to promote greater understanding of any observations, exceptions, special instructions, or circumstances that the laboratory needs to communicate to the client concerning the above samples. The information below is used to help promote your ability to make the most informed decisions for you and your customers. Please note the following points of contact for any questions you may have.

iATL Customer Service: customerservice@iatl.com
iATL OfficeManager: ?wchampion@iatl.com
iATL Account Representative: Shirley Clark
Sample Login Notes: See Batch Sheet Attached
Sample Matrix: Water
Exceptions Noted: See Following Pages

General Terms, Warrants, Limits, Qualifiers:

General information about iATL capabilities and client/laboratory relationships and responsibilities are spelled out in iATL policies that are listed at www.iATL.com and ir our Quality Assurance Manual per ISO 17025 standard requirements. The information therein is a representation of iATL definitions and policies for turnaround times, sample submittal, collection media, blank definitions, quantification issues and limit of detection, analytical methods and procedures, sub-contracting policies, results reporting options, fees, terms, and discounts, confidentiality, sample archival and disposal, and data interpretation.

iATL warrants the test results to be of a precision normal for the type and methodology employed for each sample submitted. iATL disclaims any other warrants, expressed or implied, including warranty of fitness for a particular purpose and warranty of merchantability. iATL accepts no legal responsibility for the purpose for which the client uses test results. Any analytical work performed must be governed by our Standard Terms and Conditions. Prices, methods and detection limits may be changed without notification. Please contact your Customer Service Representative for the most current information.

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA LAP LLC, or any agency of local, state or province governments nor of any agency of the U.S. government.

Information Pertinent to this Report:

Analysis by AAS Graphite Furnace:
- ASTM D3559-15D

Certification:
- NYS-DOH No. 11021
- NJDEP No. 03863

Note: These methods are analytically equivalent to iATL's accredited method;

- USEPA 40CFR 141.11B
- USEPA 200.9 Pb, AAS-GF, RL <2 ppb/sample
- USEPA SW 846-7421 - Pb(AAS-GF, RL <2 ppb/sample)

Regulatory limit for lead in drinking water is 15.0 parts per billion as cited in EPA 40 CFR 141.11 National Primary Drinking Water Regulations, Subpart B: Maximum contaminant levels for inorganic chemicals.

All results are based on the samples as received at the lab. iATL assumes that appropriate sampling methods have been used and that the data upon which these results are based have been accurately supplied by the client.

Sample results are not corrected for contamination by field or analytical blanks.

PPB = Parts per billion. 1 µg/L = 1 ppb MDL = 0.24 PPB Reporting Limit (RL) = 1.0 PPB

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Telephone: 856-231-9449
Email: customerservice@iatl.com

CERTIFICATE OF ANALYSIS

Client:	Karl Environmental Group	Report Date:	4/8/2025
	20 Lauck Road	Report No.:	711727 - Lead Water
	Mohnton PA 19540	Project:	Northern Hills Academy
		Project No.:	25-0594
Client:	KAR387		

Disclaimers / Qualifiers:

There may be some samples in this project that have a "NOTE:" associated with a sample result. We use added disclaimers or qualifiers to inform the client about something that requires further explanation. Here is a complete list with highlighted disclaimers pertinent to this project. For a full explanation of these and other disclaimers, please inquire at **customerservice@iatl.com.**

Matrix spiking is performed on each client batch to determine if interferences could impact results. When spike recoveries fall out of acceptable range matrix interference is suspected and samples are diluted until acceptable spike recovery can be achieved. Reporting limits will increase by the same degree as the dilution required.

Note: Sample dilution required due to matrix interference.

Water Sample Turbidity greater than 1.0 NTU does not meet Federal and NJ State Primary & Secondary Drinking Water Standards.

* ASTM D3559 (D) calls for the addition of acid at the time of sampling. Unless so noted on the chain of custody by the client iATL acidifies samples to a pH of <2 at least 24 hours prior to analysis.

iATL INTERNATIONAL
ASBESTOS TESTING LABORATORIES

9000 Commerce Parkway, Suite B • Mount Laurel, NJ 08054
Phone: 877-428-4285/856-231-9449 • Fax: 856-231-9818

004015655

Chain of Custody

– Environmental Lead –

Contact Information

Client Company:	Karl Environmental Group	**Project Number:**	25-0594
Office Address:	20 Lauck Road	**Project Name:**	Northern Hills Academy
City, State, Zip:	Mohnton, PA 19540	**Primary Contact:**	Barry M. Hunsberger
Fax Number:	610-856-5040	**Office Phone:**	610-856-7700
Email Address:	bhunsberger@karlenv.com	**Cell Phone:**	484-269-7870

iATL is accredited by the National Lead Laboratory Accreditation Program (NLLAP) to perform analytical testing of environmental samples for lead (Pb). The accreditation is through AIHA-LAP, LLC and several other nationally recognized state programs.

Matrix/Method:

- ☐ Paint by AAS: ASTM D3335-85a, 2009
- ☐ Wipe/Dust by AAS: SW 846: 3050B: 700B, 2010
- ☐ Air by AAS: NIOSH 7082, 1994
- ☐ Soil by AAS: EPA SW 846 (Soil)
- ☒ Water by AAS-GF: ASTM D3559-03D, US EPA 200.9
- ☐ Other Metals (Cd, Zn, Cr) by AAS
- ☐ Toxicity Characteristic Leaching Procedure (TCLP) by AAS: US EPA 1311
- ☐ Other _____

Special Instructions: 200.8

Turnaround Time

Preliminary Results Requested Date: _____ ☐ Verbal ☐ Email ☐ Fax

Specific date / time

☐ 10 Day ☐ 5 Day ☒ 3 Day ☐ 2 Day ☐ 1 Day* ☐ 12 Hour** ☐ 6 Hour** ☐ RUSH**

* End of next business day unless otherwise specified. ** Matrix Dependent. ***Please notify the lab before shipping***

Chain of Custody

Relinquished (Name/Organization):	Karl Environmental	Date: 4/4/25	Time:
Received (Name / iATL):		Date: 4/4/25	Time: 9:45 APR
Sample Login (Name / iATL):		Date:	Time:
Analysis(Name(s) / iATL):		Date:	Time:
QA/QC Review (Name / iATL):		Date:	Time:
Archived / Released: _____	QA/QC InterLAB Use: _____	Date:	Time:

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Sample Log

–Environmental Lead –

Client: Karl Environmental Group Project: 25-0594

Sampling Date/Time: 04/4/2025

Client Sample #	iATL #	Location/ Description	Flow Rate	Start End	Sampling time (min)	Area (ft2) Volume (L)	Results ( )
NHA-Blank	7833659	Blank				250mL	
NHA-SK-120	7833660	RM 120 Sink				250mL	
NHA-SK-105	7833661	RM 105 Sink				250mL	
NHA-SK-103	7833662	RM 103 Sink				250mL	
NHA-SK-108	7833663	RM 108 Sink				250mL	
NHA-SK-102	7833664	RM 102 Sink				250mL	
NHA-SK-111	7833665	RM 111 Sink				250mL	
NHA-SK-116-A	7833666	Room 116 A sink				250mL	
NHA-SK116C	7833667	Room 116C sink				250mL	
[redacted]						[redacted]	

* = *Insufficient Sample Provided to Perform Q* *Reanalysis (< 200mg)*
** = *Insufficient Sample Provided to Analyze* *50mg)* ***– *Matrix / Substrate Interference Possible*
FB = Method Requires the submittal of blank(s) *ML = Multi Layered Sample. May result in inconsistent results.*
These **preliminary results** are issued by iATL expedite procedures by clients based upon the above data. iATL assumes that all of the sampling methods and data upon which these results are based, ha been accurately supplied by the client. These results may not have been reviewed by the Laboratory Director. Final Certificate of Analysis will follow these p liminary results. The signed COA is to be considered the official results. All EPA, HUD, and NJDEP conditions apply.