Sampling Report - Lead in Drinking Water
White Township School District

1. Sampling Results Summary and Statistics

Sample Collection Date	Jun 10, 2022
Number of Buildings Sampled	1
Total Number of Samples Collected	13
Number of Samples with No Detectible Lead	6
Number of Samples Exceeding 15 ppb (0.015 mg/L Standard)	0
Number of Samples Exceeding 5 ppb (0.005 mg/L EPA threshold)	1
Highest Measured Lead Content (ppb)	15.0

2. Water Sampling Procedures

Sampling protocols and procedures follow the EPA "3-T's Program" that was developed for schools and Child Care centers. They recognize that the typical school building is actually a conglomeration of an original building with one or more additions, each of which typically having different plumbing system materials.

In addition, building sections constructed before 1986 likely have plumbing systems that used leaded solders on Copper water lines. Very old buildings and public water supply systems may also still have lead piping. Other potential sources of Lead in drinking water systems include brass faucets, fittings, along with valve seats and stems that are used in the municipal and building piping distribution systems. It is important to note that "Lead-Free" plumbing components used since 1986 may actually contain up to 8% Lead by weight. In January 2014, this limit was lowered from 8% to 0.2% Lead.

The sampling protocol requires that water be collected as a "First-Draw" to ensure that the water sample has been standing for at least 8 hours. This is intended to replicate a "worst-case" situation since both the Lead levels are usually lowered significantly after running the water even for a few moments.

Drinking water samples were collected early on a weekday (not Monday) or Saturday morning before staff and students arrived for classes to represent water that has sat idle in the building piping system overnight.

All samples were collected in 250 ml contaminant-free containers. Laboratory analysis of the water samples was performed by the International Asbestos Testing Laboratory, Inc of Mt. Laurel, NJ (NJ DEP Certification Nos. 03863). The analytical method is per EPA Method 200.98 via atomic absorption, graphite furnace technique.

3. Sample Results and Discussion

Sampling results are discussed below and the sampling log is appended to this report. It is important to note that the laboratory results are reported in terms of micrograms per liter (µg/L). This is essentially equivalent to parts of Lead per billion (ppb) parts of water. The Action level also translates to 15 ppb.

A total of 13 water samples were collected on June 10, 2022. None of the samples exceeded the 15 µg//L Action Level and 6 of the 13 water samples had detectible levels of Lead present just below the standard.

There was one sample where the results are exactly equal to the 15 µg/L standard. As such, the sample result did not exceed the standard.

4. Recommendations and Future Work

All water sample results showed acceptable results for Lead content. The following responses include those required by N.J.A.C. 6A:26-12.4 and our recommendations to maintain the drinking water quality as it relates to Lead contamination.

The NJDOE regulations requires that:

- These sampling results be made publically available at the school building and on the School District's website.

- The School District shall collect drinking water samples and analyze for Lead at any drinking water outlet that has been replaced or after any alterations to the plumbing or service lines to the outlet. Do not consume or cook with water from the affected outlet until acceptable Lead results are obtained.

- Repeat water sampling within 3 years of the date of this sampling or before May 2025.

In addition, we suggest that the following responses to minimize the potential for Lead contamination of drinking water:

Administrative Responses:

- There are several factors that influence the potential for Lead corrosion in drinking water piping systems. These include the chemistry of the water supplied being supplied to the building, water temperature and velocity through the piping, the age and condition of the plumbing, and the amount of time the water sits "stagnant" in contact with piping and drinking water fixtures. This last factor is the only one that a building owner has any control of.

- School building codes require a minimum of one (1) drinking water tap for every 100 students of building capacity. Wherever a larger number of water taps exists, the usage factor for each tap decreases. This, in turn, increases the "stagnation time" along with the increased potential for Lead corrosion. It is recommended that the need for all

current water taps be investigated and reduced where appropriate while maintaining the minimum of 1 tap per 100 students.

- Consider implementing a program to shut-off and replace (if needed) any drinking water fixture of appliance that is more than 35 years old (was installed before the 1986 Lead Ban took effect).

Operational and Maintenance Responses:

- EPA recommends that any water tap where the measured Lead content exceeds 5 parts per billion (PPB) or 5 µg/L be inspected and cleaned of line sediment to eliminate potential sources of Lead contamination. There were 1 water samples above this level.

- Use cold water only for drinking or cooking. Higher water temperatures will increase the water's corrosion potential.

- The accumulation of line sediment on aerators and screens at the water taps is frequently the source of high levels of Lead. It is recommended that a program be established to regularly inspect for the presence of line sediment at all drinking water taps. Initially, an annual inspection is suggested. The inspection frequency should then be adjusted depending upon the amounts of sediment that is found and where it is found. Higher usage taps may accumulate sediment more quickly and need to be cleaned more often.

- It is known that flushing water through drinking water taps will reduce the levels of both Lead and Copper present in the drinking water. It is also recommended that a program be established to run water at all drinking or cooking taps for at least one minute before students and staff return to school after long breaks, especially after the Summer recess.

Report prepared by:

Patrick D. McGuinness, MS, P.E.
Vice President

Water Sampling Log

Name of Building White Township School
Building Owner White Township Bd of Educ

Date Collected 10-Jun-22
Sample Collected by PD McGuinness

Sample No.	Tap No.	Sample Type	Type of Outlet	Manufacturer	Sample Location	Time	Results (µg/L)	
							Cu	Pb
--	**1**	1st	Sink		Teacher's Room 14B **** Used for Washup Only ****	--	XX	--
RK-061022-02	**2**	1st	Chiller	Bottle Filler	Cafeteria 11B	07:22	XX	**ND**
--	**3**	1st	Bubbler		Cafeteria 11B **** Removed ****	--	XX	--
--	**4**	1st	Sink		Kitchen 12B - Hand Sink **** Used for Washup Only ****	--	XX	--
--	**5**	1st	Sink		Kitchen 12B - Main Sink **** Used for Washup Only ****	--	XX	--
RK-061022-01	**6**	1st	Pot Filler		Kitchen 12B - Pot Filler	07:18	XX	15.0
RK-061022-03	**7**	1st	Chiller	Bottle Filler	Hallway - by closet 111	07:25	XX	1.0
RK-061022-04	**8**	1st	Chiller	Bottle Filler	Hallway - by closet 151	07:27	XX	2.6
RK-061022-13	**9**	1st	Sink		Room 190	07:41	XX	1.8
--	**10**	1st	Bubbler		Room 200 **** Removed ****	--	XX	--
--	**11**	1st	Bubbler		Room 210 **** Removed ****	--	XX	--
--	**12**	1st	Bubbler		Room 230 **** Removed ****	--	XX	--
--	**13**	1st	Bubbler		Room 240 **** Removed ****	--	XX	--
--	**14**	1st	Bubbler		Room 250 **** Removed ****	--	XX	--
RK-061022-12	**15**	1st	Chiller	Bottle Filler	Hallway - by Room 300	07:38	XX	**ND**
--	**16**	1st	Chiller	Halsey Taylor	Hallway - by Room 360B **** Removed ****	--	XX	--
RK-061022-05	**17**	1st	Sink		Office Workroom	07:28	XX	1.0
RK-061022-06	**18**	1st	Sink		Nurse's Office - Front Room	07:30	XX	1.7
RK-061022-07	**19**	1st	Sink		Nurse's Office - Side Room	07:30	XX	1.7
RK-061022-08	**20**	1st	Chiller	Elkay	Hallway - by Gym, left side	07:32	XX	**ND**

Sample Type: **1st:** First Draw sample collected after water sat in pipe between 8 and 18 hours
FL: Water flushed through tap for at least 2 minutes
ND: means Not Detected at or above the Reliability Detection Limit (RDL) of 0.0010 mg/L for Lead.

Water Sampling Log

Name of Building White Township School
Building Owner White Township Bd of Educ

Date Collected 10-Jun-22
Sample Collected by PD McGuinness

Sample No.	Tap No.	Sample Type	Type of Outlet	Mfg/Model Serial No.	Sample Location	Time	Results (mg/L)	
							Cu	Pb
RK-061022-09	**21**	1st	Chiller	Bottle Filler	Hallway - by Gym, center	07:32	XX	**ND**
RK-061022-10	**22**	1st	Chiller	Elkay	Hallway - by Gym, right side	07:32	XX	**ND**
RK-061022-11	**23**	1st	Sink		MD Room 520	07:34	XX	**ND**

Sample Type: **1st:** First Draw sample collected after water sat in pipe between 8 and 18 hours
FL: Water flushed through tap for at least 2 minutes
ND: means Not Detected at or above the Reliability Detection Limit (RDL) of 0.0010 mg/L for Lead.

iATL INTERNATIONAL
ASBESTOS TESTING LABORATORIES

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

CERTIFICATE OF ANALYSIS

Client: R. K. Environmental Consultants
401 St. James Ave.
Phillipsburg NJ 08865

Client: RKE630

Report Date: 6/14/2022
Report No.: 662672 - Lead Water
Project: White Township School
Project No.: 22-074

LEAD WATER SAMPLE ANALYSIS SUMMARY

Lab No.:7442078 **Client No.:**RK-061022-02	**Location:**Cafeteria 11B Chiller * Sample acidified to pH <2.	**Result(ppb):**<1.00
Lab No.:7442079 **Client No.:**RK-061022-01	**Location:**Kitchen 12B - Pot Filler * Sample acidified to pH <2.	**Result(ppb):**15.0
Lab No.:7442080 **Client No.:**RK-061022-03	**Location:**Hallway - By Closet 111 Chiller Bottle Filler * Sample acidified to pH <2.	**Result(ppb):**1.00
Lab No.:7442081 **Client No.:**RK-061022-04	**Location:**Hallway - By Closet 151 Chiller Bottle Filler * Sample acidified to pH <2.	**Result(ppb):**2.60
Lab No.:7442082 **Client No.:**RK-061022-13	**Location:**Room 190 Sink * Sample acidified to pH <2.	**Result(ppb):**1.80
Lab No.:7442083 **Client No.:**RK-061022-12	**Location:**Hallway - By Room 300 Chiller Bottle Filler * Sample acidified to pH <2.	**Result(ppb):**<1.00
Lab No.:7442084 **Client No.:**RK-061022-05	**Location:**Office Workroom Sink * Sample acidified to pH <2.	**Result(ppb):**1.00
Lab No.:7442085 **Client No.:**RK-061022-06	**Location:**Nurse's Office - Front Room Sink * Sample acidified to pH <2.	**Result(ppb):**1.70
Lab No.:7442086 **Client No.:**RK-061022-07	**Location:**Nurse's Office - Side Room Sink * Sample acidified to pH <2.	**Result(ppb):**1.70
Lab No.:7442087 **Client No.:**RK-061022-08	**Location:**Hallway - By Gym, Left Side Chiller Elkay * 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: 6/10/2022
Date Analyzed: 06/14/2022
Signature:
Analyst: Mark Stewart

Approved By:
Frank E. Ehrenfeld, III
Laboratory Director

Dated : 6/15/2022 10:38:20

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Client: RKE630

Report Date: 6/14/2022
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Project: White Township School
Project No.: 22-074

LEAD WATER SAMPLE ANALYSIS SUMMARY

Lab No.:7442088 **Location:**Hallway - By Gym, Center Chiller Bottle Filler **Result(ppb):**<1.00
Client No.:RK-061022-09 * Sample acidified to pH <2.

Lab No.:7442089 **Location:**Hallway - By Gym, Right Side Chiller Elkay **Result(ppb):**<1.00
Client No.:RK-061022-10 * Sample acidified to pH <2.

Lab No.:7442090 **Location:**MD Room 520 Sink **Result(ppb):**<1.00
Client No.:RK-061022-11 * Sample acidified to pH <2.

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

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Date Analyzed: 06/14/2022
Signature:
Analyst: Mark Stewart

Approved By:
Frank E. Ehrenfeld, III
Laboratory Director

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Appendix to Analytical Report:

Customer Contact: Jonathan Gilbert
Analysis: AAS-GF - ASTM D3559-08D

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.

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Information Pertinent to this Report:

Analysis by AAS Graphite Furnace:
- ASTM D3559-08D

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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Project No.: 22-074

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.

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Chain of Custody

AAS - Metals

Contact Information

Client Company:	R. K. Environmental Consultants	**Project Number:**	22-074
Office Address:	401 St. James Ave.	**Project Name:**	White Township School
City, State, Zip:	Phillipsburg, NJ 08865	**Primary Contact:**	Pat McGuinness
Fax Number:	9084544818	**Office Phone:**	
Email Address:	pdmcguinness@enter.net	**Cell Phone:**	9083102663

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 _____

13 x Water Samples for Pb

5-day Results

Special Instructions:

See Attached sample log (2pgs)

Turnaround Time

Preliminary Results Requested Date: 6/17/2022 5:00:00 PM (Specific date/time)

☑ Email ☐ Hard Copy ☑ Portal ☐ Verbal

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

Chain of Custody

Relinquished (Name/Organization):	PDM	Date:	6/10/22	Time:	Hand Carry
Received (Name/iATL):		Date:		Time:	
Sample Login (Name/iATL):		Date:	RECEIVED	Time:	
Analysis (Name(s)/iATL):	MO 6/14/22	Date:		Time:	
QA/QC Review (Name/iATL):	Becca	Date:		Time:	
Archived/Released: _____	Archived/Released: _____	Date:	JUN 10 2022	Time:	

ATL - By