



RK Occupational & Environmental Analysis Inc.

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Mold Assessment
and Remediation

November 18, 2021

Health/Safety and
Environmental
Regulatory
Compliance

Mr. Steve Campbell
Supervisor of Buildings & Grounds
Paramus Board of Education
145 Spring Valley Road
Paramus, NJ 07652

Right-To-Know

re: **Water Sampling for Compliance with N.J.A.C. 6A:26-12.4
Lead in Drinking Water: Follow-Up Water Sampling**

OSHA/EPA/DOT
Training Programs

Dear Mr. Campbell,

Asbestos and Lead
Management

This follows our previous report on the subject and covers water sampling that was conducted on November 05, 2021.

Industrial Hygiene/
OSHA Compliance

There were a total of eighteen (18) locations with sample results that exceeded the 0.015 mg/l (15 ppb) Standard for Lead during the initial water sampling. One of these locations was turned off and will remain out of service. The other 17 water outlets at the other were flushed and cleaned before the follow-up samples were collected.

Indoor Air Quality


Underground/
Aboveground
Storage Tanks

Four (4) of the follow-up samples showed no detectible levels of Lead present while five (5) others continue to show unacceptable Lead results. This report outlines the sampling results and recommendations.

Environmental
Site Assessment

If you have any questions, please don't hesitate to call us.

Hazardous/
Medical Waste
Management

Sincerely,

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

Environmental
Audits

Attachment

Expert Witness/
Litigation Support

(file ... \Proposal\WaterTest\Paramus Re-Test1)

Customized
Software

Addendum #1 to Sampling Report - Lead in Drinking Water
Paramus Board of Education

1. Background and Sampling Summary

During the initial sampling performed on August 12, 2021, a total of 114 drinking water taps were sampled for Lead and Copper in the District's buildings. There were a total of eighteen (18) samples had measured levels of Lead that exceeded the 0.015 mg/L standard.

Re-sampling at both buildings was conducted on November 05, 2021. One water tap at the High School was turned off and will remain out of service while the other seventeen (17) were re-sampled. Twelve (12) of the repeat samples showed acceptable results with four (4) water taps showing no detectible levels of Lead present. However, five (5) of the re-samples continue to show results above the Drinking Water Standard.

Bubbler in Rm. 108 has been taken out of service

It is recommended that the bubbler in Room 108 at the Memorial Elementary School be turned off and remain out of service. If needed, and on an interim basis, the other four (4) outlets could be safely used for drinking or cooking provided each tap is flushed for 2 minutes at the beginning of each day.

Otherwise, those four water outlets should remain out of service until there are acceptable Lead sampling results.

2. Water Sampling Results

All results are shown in terms of parts per billion (ppb). This unit of measure is equivalent to micrograms of Lead per liter of water ($\mu\text{g/L}$). Whereas the current drinking water standard for Lead in Drinking Water is promulgated as 0.015 mg/L, that level can also be expressed as 15 $\mu\text{g/L}$. Results could also be expressed in equivalent terms of parts per billion (ppb) where the standard translates to 15 ppb.

Water sampling logs with results for the re-test samples are attached. In addition, the water sampling results for both the initial sampling in August are compared with the November sample results on **Table 1** at the end of this report. The laboratory analytical report is appended to this report.

A total of five (5) water taps still show unacceptable results for Lead in the water samples. Three of the four samples collected at the east Brook Middle School continue to show Lead levels above the 15 ppb standard. In addition, there was one sample each at the Parkway and Memorial Elementary Schools also unacceptable Lead results.

3. Conclusions and Recommendations

It is known that flushing water through drinking water taps will reduce the levels of Lead present in the drinking water. If needed, and on an interim basis only, the water taps that continue to show unacceptable sampling results can be safely used for drinking or cooking provided each tap is flushed for 2 minutes at the beginning of each day. This should only be considered an interim basis.

Acceptable re-sample results were obtained at the High School, West Brook Middle School, and the Ridge Ranch and Stoney lane Elementary Schools and these water outlets can be returned to service. Recommendations for the other five (5) water taps still above the 15 ppb standard are as follows:

East Brook Middle School:

| | |
|---|--|
| Kitchen Sink, across from prep area & freezer | Leave turned off or flush outlet daily |
| Nurse's Office sink / Eye Wash | Leave turned off or flush outlet daily |
| Sink in Instrumental Music Room | Post sign "Not for Drinking Water" |

Parkway Elementary School:

| | |
|------------------------|--|
| Main Office Break Room | Leave turned off or flush outlet daily |
|------------------------|--|

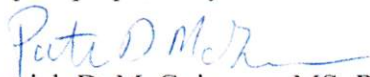
Memorial Elementary School:

| | |
|---------------------|--|
| Bubbler in Room 108 | Leave turned off and remove from service |
|---------------------|--|

The NJ Dept of Education drinking water regulation also requires that water samples be collected after any work on the outlet fixture or on the plumbing supply lines to a water tap.

Unless the water taps noted above are flushed daily they should remain out of service until they can be inspected, repaired or replaced, and then only returning to unrestricted service again after having acceptable Lead sampling results.

Report prepared by:



Patrick D. McGuinness, MS, P.E.

Vice President

Water Sampling Log - ReTests

Name of Building
Building Owner

see below
Paramus Board of Education

Date Collected 05-Nov-21
Sample Collected by JS Gilbert

| Sample No. | Tap No. | Sample Type | Type of Outlet | Manufacturer | Location | Time | Results (mg/L) | |
|---|---------|-------------|----------------|--------------|---|-------|----------------|----------|
| | | | | | | | Cu | Pb |
| <u>High School</u> | | | | | | | | |
| RK-110521-01 | 14 | 1st | Ice Maker | | Outside Trainer's | 07:20 | XX | < 0.0010 |
| RK-110521-02 | 13 | 1st | Sink/faucet | | Nurse Office | 07:25 | XX | 0.0025 |
| RK-110521-03 | 5 | 1st | Sink/faucet | | Faculty Room | 07:30 | XX | 0.0123 |
| RK-110521-04 | 33 | 1st | Chiller | | Board Office Hall | 07:35 | XX | < 0.0010 |
| <u>East Brook Middle School</u> | | | | | | | | |
| RK-110521-05 | 3 | 1st | Sink/faucet | | Kitchen - across from prep area & freezer <i>Hand wash only</i> | 09:34 | XX | 0.0230 |
| RK-110521-06 | 4 | 1st | Sink/faucet | | Kitchen - across from refrigerator | 09:33 | XX | 0.0042 |
| RK-110521-07 | 8 | 1st | Sink/Eye wash | | Nurse Office <i>Hand wash only</i> | 09:30 | XX | 0.0242 |
| RK-110521-08 | 9 | 1st | Sink | | Instrument Music Room <i>Room A3 - Hand wash only</i> | 09:28 | XX | 0.0552 |
| <u>Parkway Elementary School</u> | | | | | | | | |
| RK-110521-09 | 4 | 1st | Sink | | PTA Kitchen - left side | 09:10 | XX | < 0.0010 |
| RK-110521-10 | 7 | 1st | Sink/faucet | | Main Office Break Room <i>→ Hand wash only</i> | 09:25 | XX | 0.1800 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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
<: means Not Detected at or above the Reliability Detection Limit (RDL) of 0.0010 mg/L for Lead.

Water Sampling Log - ReTests

Name of Building see below
 Building Owner Paramus Board of Education

Date Collected 05-Nov-21
 Sample Collected by JS Gilbert

| Sample No. | Tap No. | Sample Type | Type of Outlet | Manufacturer | | Time | Results (mg/L) | |
|---|---------|-------------|----------------|---------------|--|-------|----------------|----------|
| | | | | | | | Cu | Pb |
| <u>West Brook Middle School</u> | | | | | | | | |
| RK-110521-11 | 8 | 1st | Bubbler | | Hallway - next to Faculty Women's Room | 11:15 | XX | 0.0010 |
| RK-110521-12 | 13 | 1st | Sink/faucet | | Kitchen - prep sink faucet | 11:17 | XX | 0.0116 |
| RK-110521-13 | 14 | 1st | Sink | | Kitchen Prep Sink | 11:17 | XX | 0.0063 |
| RK-110521-14 | 17 | 1st | Sink/faucet | | Storage next to Room 30 | 11:20 | XX | 0.0051 |
| <u>Memorial Elementary School</u> | | | | | | | | |
| RK-110521-15 | 6 | 1st | Bubbler | | Room 108 ** | 12:05 | XX | 0.1860 |
| <u>Ridge Ranch Elementary School</u> | | | | | | | | |
| RK-110521-16 | 6 | 1st | Bubbler | Halsey Taylor | Hallway - across from Resource Room | 11:49 | XX | 0.0015 |
| <u>Stoney Lane Elementary School</u> | | | | | | | | |
| RK-110521-17 | 9 | 1st | Sink/faucet | | Faculty Room | 10:15 | XX | < 0.0010 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

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
<: means Not Detected at or above the Reliability Detection Limit (RDL) of 0.0010 mg/L for Lead.

Table 1: Water Outlets with Greater than 15 µg/L for Lead
Comparison of Initial and Re-Test Results for Lead

| Sample Location | Initial Results Aug 10 (µg/l or ppb) | ReTest Results Nov 05 (µg/l or ppb) |
|---|--|---|
| <u>High School</u> | | |
| Sink in Faculty Room | 17.6 | 12.3 |
| Sink in Nurse's Office | 53.5 | 2.5 |
| Ice Maker outside Trainer's Office | 20.3 | None Detected |
| Chiller outside Board Office | 4,250 | Out of Service |
| Chiller in Board Office hallway | 65.5 | None Detected |
| <u>East Brook Middle School</u> | | |
| Kitchen Sink, across from prep area & freezer | 1,110 | 23.0 |
| Kitchen Sink, across from refrigerator | 30.3 | 4.2 |
| Nurse's Office sink / Eye Wash | 38.4 | 24.2 |
| Sink in Instrumental Music Room | 43.1 | 55.2 |
| <u>Parkway Elementary School</u> | | |
| PTA Kitchen Sink, left side | 19.3 | None Detected |
| Main Office Break Room | 18.3 | 180 |
| <u>West Brook Middle School</u> | | |
| Bubbler in hall by Faculty Women's Room | 21.1 | 1.0 |
| Kitchen Prep Sink faucet | 90.0 | 11.6 |
| Kitchen Prep Sink | 23.7 | 6.3 |
| Sink in Storage Room, next to Room 30 | 45.5 | 5.1 |
| <u>Memorial Elementary School</u> | | |
| Bubbler in Room 108 | 62.1 | 186 |
| <u>Ridge Ranch Elementary School</u> | | |
| Bubbler in hallway across from Resource Room | 35.7 | 1.5 |
| <u>Stoney Lane Elementary School</u> | | |
| Faculty Room sink | 38.0 | None Detected |

CERTIFICATE OF ANALYSIS

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


Client: RKE630

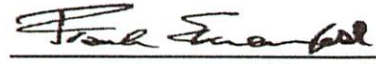
Report Date: 11/11/2021
Report No.: 647201 - Lead Water
Project: Paramus BOE Lead
Project No.:

LEAD WATER SAMPLE ANALYSIS SUMMARY

| | | |
|---|---|-------------------|
| Lab No.:7314109 Client No.:RK110521-01 | Location:Paramus High Sch Ice Maker Outside Trainer's Office * Sample acidified to pH <2. | Result(ppb):<1.00 |
| Lab No.:7314110 Client No.:RK110521-02 | Location:PHS Sink In Nurse's Office * Sample acidified to pH <2. | Result(ppb):2.50 |
| Lab No.:7314111 Client No.:RK110521-03 | Location:PHS Guidance Break Rm Sink * Sample acidified to pH <2. | Result(ppb):12.3 |
| Lab No.:7314112 Client No.:RK110521-04 | Location:PHS Chiller In Board Office Hall * Sample acidified to pH <2. | Result(ppb):<1.00 |
| Lab No.:7314113 Client No.:RK110521-05 | Location:East Brook Middle Sch Kitchen Sink Across From Prep Area And Freezer * Sample acidified to pH <2. | Result(ppb):23.0 |
| Lab No.:7314114 Client No.:RK110521-06 | Location:EBMS Kitchen Access From Refridgerator * Sample acidified to pH <2. | Result(ppb):4.20 |
| Lab No.:7314115 Client No.:RK110521-07 | Location:EBMS Nurse's Office Sink * Sample acidified to pH <2. | Result(ppb):24.2 |
| Lab No.:7314116 Client No.:RK110521-08 | Location:EBMS Sink In Instrumental Music Rm * Sample acidified to pH <2. | Result(ppb):55.2 |
| Lab No.:7314117 Client No.:RK110521-09 | Location:Parkway Elem Sch PTA Kitchen Sink Left Side * 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: 11/8/2021
Date Analyzed: 11/11/2021
Signature: 
Analyst: Mark Stewart

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

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Phillipsburg NJ 08865


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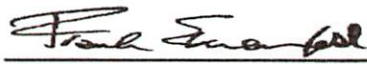
Client: RKE630

LEAD WATER SAMPLE ANALYSIS SUMMARY

| | | |
|---|--|-------------------|
| Lab No.:7314118 Client No.:RK110521-10 | Location:PES Main Office Break Rm * Sample acidified to pH <2. | Result(ppb):180 |
| Lab No.:7314119 Client No.:RK110521-11 | Location:West Brook Mid Sch Bubbler In Hall By Women's Faculty Rm * Sample acidified to pH <2. | Result(ppb):1.00 |
| Lab No.:7314120 Client No.:RK110521-12 | Location:WBMS Kitchen Prep Sink Faucet * Sample acidified to pH <2. | Result(ppb):11.6 |
| Lab No.:7314121 Client No.:RK110521-13 | Location:WBMS Kitchen Prep Sink * Sample acidified to pH <2. | Result(ppb):6.30 |
| Lab No.:7314122 Client No.:RK110521-14 | Location:WBMS Sink In Storage Rm Next To Rm 30 * Sample acidified to pH <2. | Result(ppb):5.10 |
| Lab No.:7314123 Client No.:RK110521-15 | Location:Memorial Elem Sch Bubbler In Rm 108 * Sample acidified to pH <2. | Result(ppb):186 |
| Lab No.:7314124 Client No.:RK110521-16 | Location:Ridge Ranch Elem Sch Bubbler In Hall Across Resource Rm 100 Wing * Sample acidified to pH <2. | Result(ppb):1.50 |
| Lab No.:7314125 Client No.:RK110521-17 | Location:Stoney Lane Elem Sch Faculty Rm 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: 11/8/2021
Date Analyzed: 11/11/2021
Signature: 
Analyst: Mark Stewart

Approved By: 
Frank E. Ehrenfeld, III
Laboratory Director

CERTIFICATE OF ANALYSIS

Client: R. K. Environmental Consultants
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Phillipsburg NJ 08865

Report Date: 11/11/2021
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Project No.:

Client: RKE630

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 Office Manager: ?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 in 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.

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

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Phillipsburg NJ 08865

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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.