

Lead/Copper Water Sampling Report

For

Berkley School District

Anderson Middle School & Avery Elementary School

March & April, 2016

Berkley School District

Lead/Copper Water Sampling Report

Background:

In March & April of 2016, Rod Fisher, Custodial & Operations Facilitator for Berkley School District contacted Nova Environmental, Inc. and requested Lead and Copper Water sampling of fixtures within the Anderson Middle School Kitchen and Avery Elementary School Kitchen, due to elevated Lead and Copper sample results. They also requested additional fixtures be tested within the Kitchen of Anderson Middle School. The sampling conducted at Avery Elementary from the Kitchen, Double Sink, Right Faucet showed the Lead and Copper levels were under the federal action level. The sampling conducted at Anderson Middle School, Kitchen, Northwest Sink, showed elevated Lead and Copper and the Middle West Wall Sink showed elevated Lead. As a result Berkley School District decided to change the fixtures where the Lead and Copper came back elevated at Anderson Middle School and requested an additional sampling of the replaced fixtures. After Resampling at Anderson Middle School, the Lead levels from the Kitchen Northwest sink were still elevated. Berkley School District then performed maintenance on the pipe connected to the Northwest sink fixture and requested additional sampling from that fixture. After Resampling at Anderson Middle School, Kitchen, Northwest Sink the Lead levels came back under the federal action level.

Sampling Methodology:

On March 27, April 5 & 15, 2016, environmental consultants from Nova Environmental, Inc. conducted the water sample collection at Anderson Middle School and Avery Elementary. The water samples were collected “first draw” which means that the tap was not flushed prior to sample collection. This first draw method is stipulated within the Environmental Protection Agency and Michigan Department of Environmental Quality (MDEQ) sampling guidelines for lead and copper.

The water samples were collected on the weekend and/or early morning in order to ensure that the faucet has sat idle for a minimum of six hours prior to sample collection.

Sample Analysis:

Subsequent to the collection, the sample bottles were hand delivered to the National Testing Laboratories, Ltd., Ypsilanti, Michigan. The type of analysis performed on the water samples was Inductively Coupled Plasma – Mass Spectrometry (ICP – MS).

Sample Results:

The action level established by the Environmental Protection Agency (EPA) for lead in drinking water is 0.015 milligrams per liter (mg/L) while for copper is 1.3 mg/L.

The results of all samples collected and analyzed at Anderson Middle School and Avery Elementary were below the action levels for both lead and copper.

Limitations:

The intent of this sampling was to conduct a simple, cursory screening for lead/copper in drinking water within Berkley School District. Therefore, this report was not intended to or should not be construed to provide any type of regulatory compliance. Furthermore, the sampling from two to four taps within a building does not imply a thorough or even representative indication of lead/copper in the drinking water, but is intended to simply provide a snapshot of lead/copper levels at the specific locations tested. In order to clarify, Nova Environmental, Inc. provides the following disclaimers:

- The determination of what taps to test were discussed with District staff and were based on those most likely to be used for consumption, which usually included one sample within the Kitchen;
- The intent of this sampling was not to provide any means or implication of regulatory compliance;
- The only way to ensure an accurate indication of potential lead/copper in water presence within a given building is to test each tap on a periodic basis.

Laboratory Statement of Qualifications:

National Testing Laboratories, Ltd. is a fully certified laboratory for the analysis of lead and copper in thirty four states throughout the US including Michigan. Included within this report is a Statement of Qualifications for lead and copper analysis along with a copy of their Michigan certification.

Berkley School District
March 27, 2016

Anderson Middle School

	Location	Lead	Copper
Sample ID - 182231	Southwest Kitchen Sink	0.005 mg/L	0.086 mg/L
Sample ID - 182246	Middle West Wall Sink	0.017 mg/L	0.360 mg/L
Sample ID - 182288	Northwest Kitchen Sink	0.079 mg/L	2.400 mg/L
Sample ID - 182227	Center Sink	0.002 mg/L	0.085 mg/L

Avery Elementary

	Location	Lead	Copper
Sample ID - 182243	Kitchen, Double Sink, Right Faucet	0.002 mg/L	0.610 mg/L

National Testing Laboratories, Ltd

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 (440) 449-2525, Fax: (440) 449-8585

ANALYTICAL REPORTS

SAMPLE CODE: 352592

4/1/2016

Customer: Nova Environmental Inc.
 Kary Amin
 5300 Plymouth Road
 Ann Arbor, MI 48105

Source: Berkley School District-
 Anderson Middle School,
 182231
Source City: Berkley
Source State: MI

Date/Time Received: 3/29/2016 08:30

Collected by: L. Whitton

The results herein conform to TNI and ISO/IEC 17025:2005 standards, where applicable, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:
 Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

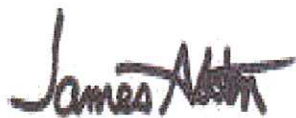
- "ND" This contaminant was not detected at or above our lower reporting limit (LRL)
- "NA" Not Analyzed
- "Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.
- "LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.
- "DF" This column indicates the contaminant dilution factor.

Report Notes:
 LCR= Lead & Copper Rule

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
Inorganic Analytes - Metals										
1022	Copper (LCR)	200.8	1.3	mg/L	0.002	0.086	1	3/27/2016 05:57		3/31/2016
1030	Lead	200.8	0.015	mg/L	0.001	0.005	1	3/27/2016 05:57		3/31/2016

These test results may be used for compliance purpose as required.

Analyst	Tests
EC	200.8



James Abston, Operations Manager

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ANALYTICAL REPORTS**SAMPLE CODE: 352594****4/1/2016**

Customer: Nova Environmental Inc.
Kary Amin
5300 Plymouth Road
Ann Arbor, MI 48105

Source: Berkley School District-
Anderson Middle School,
182246
Source City: Berkley
Source State: MI

Date/Time Received: 3/29/2016 08:30**Collected by:** L. Whitton

The results herein conform to TNI and ISO/IEC 17025:2005 standards, where applicable, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

LCR= Lead & Copper Rule

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
Inorganic Analytes - Metals										
1022	Copper (LCR)	200.8	1.3	mg/L	0.002	0.360	1	3/27/2016 05:58		3/31/2016
1030	Lead	200.8	0.015	mg/L	0.001	0.017*	1	3/27/2016 05:58		3/31/2016

These test results may be used for compliance purpose as required.

Analyst	Tests
EC	200.8



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ANALYTICAL REPORTS

SAMPLE CODE: 352596

4/1/2016

Customer: Nova Environmental Inc.
 Kary Amin
 5300 Plymouth Road
 Ann Arbor, MI 48105

Source: Berkley School District-
 Anderson Middle School,
 182288
Source City: Berkley
Source State: MI

Date/Time Received: 3/29/2016 08:30

Collected by: L. Whitton

The results herein conform to TNI and ISO/IEC 17025:2005 standards, where applicable, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

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"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

LCR= Lead & Copper Rule

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
Inorganic Analytes - Metals										
1022	Copper (LCR)	200.8	1.3	mg/L	0.002	2.400*	1	3/27/2016 05:59		3/31/2016
1030	Lead	200.8	0.015	mg/L	0.001	0.079*	1	3/27/2016 05:59		3/31/2016

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EC	200.8



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ANALYTICAL REPORTS

SAMPLE CODE: 352595

4/1/2016

Customer: Nova Environmental Inc.
 Kary Amin
 5300 Plymouth Road
 Ann Arbor, MI 48105

Source: Berkley School District-
 Anderson Middle School,
 182227
Source City: Berkley
Source State: MI

Date/Time Received: 3/29/2016 08:30

Collected by: L. Whitton

The results herein conform to TNI and ISO/IEC 17025:2005 standards, where applicable, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

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"NA" Not Analyzed

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"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

LCR= Lead & Copper Rule

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
Inorganic Analytes - Metals										
1022	Copper (LCR)	200.8	1.3	mg/L	0.002	0.085	1	3/27/2016 06:00		3/31/2016
1030	Lead	200.8	0.015	mg/L	0.001	0.002	1	3/27/2016 06:00		3/31/2016

These test results may be used for compliance purpose as required.

Analyst	Tests
EC	200.8



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ANALYTICAL REPORTS

SAMPLE CODE: 352593

4/1/2016

Customer: Nova Environmental Inc.
 Kary Amin
 5300 Plymouth Road
 Ann Arbor, MI 48105

Source: Berkley School District-Avery
 Elementary School, 182243
Source City: Berkley
Source State: MI

Date/Time Received: 3/29/2016 08:30

Collected by: L. Whitton

The results herein conform to TNI and ISO/IEC 17025:2005 standards, where applicable, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

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"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

LCR= Lead & Copper Rule

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
Inorganic Analytes - Metals										
1022	Copper (LCR)	200.8	1.3	mg/L	0.002	0.610	1	3/27/2016 06:10		3/31/2016
1030	Lead	200.8	0.015	mg/L	0.001	0.002	1	3/27/2016 06:10		3/31/2016

These test results may be used for compliance purpose as required.

Analyst	Tests
EC	200.8



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Berkley School District
April 5, 2016

Anderson Middle School

Sample ID	Location	Lead	Copper
182325	Northwest Kitchen Sink	0.035 mg/L	0.470 mg/L
182357	Emergency Face Wash Station, West Wall	0.001 mg/L	0.230 mg/L

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ANALYTICAL REPORTS

SAMPLE CODE: 353081

4/11/2016

Customer: Nova Environmental Inc.
 Kary Amin
 5300 Plymouth Road
 Ann Arbor, MI 48105

Source: Berkley-Anderson Middle School, 182325, Northwest Corner Sink
Source City: Berkley
Source State: MI

Date/Time Received: 4/5/2016 15:30

Collected by: R. Doty

The results herein conform to TNI and ISO/IEC 17025:2005 standards, where applicable, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

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"NA" Not Analyzed

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"DF" This column indicates the contaminant dilution factor.

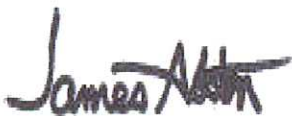
Report Notes:

LCR= Lead & Copper Rule

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
Inorganic Analytes - Metals										
1022	Copper (LCR)	200.8	1.3	mg/L	0.002	0.470	1	4/5/2016 06:50		4/11/2016
1030	Lead	200.8	0.015	mg/L	0.001	0.035*	1	4/5/2016 06:50		4/11/2016

These test results may be used for compliance purpose as required.

Analyst	Tests
EC	200.8



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ANALYTICAL REPORTS

SAMPLE CODE: 353082

4/11/2016

Customer: Nova Environmental Inc.
 Kary Amin
 5300 Plymouth Road
 Ann Arbor, MI 48105

Source:

Berkley-Anderson Middle
 School, 182357, Emergency
 Station Face Wash, West Wall

Date/Time Received: 4/5/2016 15:30

Collected by: R. Doty

The results herein conform to TNI and ISO/IEC 17025:2005 standards, where applicable, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

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"NA" Not Analyzed

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"DF" This column indicates the contaminant dilution factor.

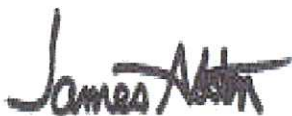
Report Notes:

LCR= Lead & Copper Rule

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
Inorganic Analytes - Metals										
1022	Copper (LCR)	200.8	1.3	mg/L	0.002	0.230	1	4/5/2016 06:45		4/11/2016
1030	Lead	200.8	0.015	mg/L	0.001	0.004	1	4/5/2016 06:45		4/11/2016

These test results may be used for compliance purpose as required.

Analyst	Tests
EC	200.8



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Berkley School District
April 15, 2016

Anderson Middle School

Sample ID	Location	Lead	Copper
186015	Faucet, Northwest Kitchen Sink next to Emergency Wash Station	0.001 mg/L	0.280 mg/L

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ANALYTICAL REPORTS

SAMPLE CODE: 353511

4/21/2016

Customer: Nova Environmental Inc.
 Kary Amin
 5300 Plymouth Road
 Ann Arbor, MI 48105

Source: Berkley SD-Anderson Middle School, 186015
Source City: Berkley
Source State: MI

Date/Time Received: 4/15/2016 12:22

Collected by: T. Fell

The results herein conform to TNI and ISO/IEC 17025:2005 standards, where applicable, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

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"NA" Not Analyzed

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"DF" This column indicates the contaminant dilution factor.

Report Notes:

LCR= Lead & Copper Rule

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
Inorganic Analytes - Metals										
1022	Copper (LCR)	200.8	1.3	mg/L	0.002	0.280	1	4/15/2016 05:58		4/20/2016
1030	Lead	200.8	0.015	mg/L	0.001	0.001	1	4/15/2016 05:58		4/20/2016

These test results may be used for compliance purpose as required.

Analyst	Tests
EC	200.8



James Abston, Operations Manager

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State of Michigan
Department of Environmental Quality
Remediation & Redevelopment Division



CERTIFIES:

**NATIONAL TESTING
LABORATORIES, LTD.**

**HAS BEEN EVALUATED AND IS APPROVED FOR THE FOLLOWING
PARAMETERS FOR THE ANALYSIS OF DRINKING WATER:**

FULL CERTIFICATION

INORGANIC CHEMISTRY

Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium,
Lead, Nickel, Selenium Thallium, Sodium and Copper
Mercury, Bromide, Bromate, Nitrate, Nitrite, Fluoride, Sulfate
Chlorate, Chlorite and Total Organic Carbon

**This certification requires maintenance of an acceptable quality assurance
program, use of approved methodology and equipment,
and satisfactory performance on evaluation samples.
This certification does not guarantee validity of data generated.**



November 6, 2018
Expiration Date

October 16, 2015
Issuance Date

Meg A Sunday
Laboratory Certification Officer

0055
Laboratory Number



Statement of Qualifications

Lead and Copper Analysis

National Testing Laboratories, Ltd. located in Ypsilanti, Michigan specializes in the testing of drinking water. We are accredited by the NELAP Institute and have also achieved ISO Certification for analyzing lead and copper. Additionally, we are certified in thirty-four states and U.S. territories for lead and copper in drinking water. Following are the methods we utilize for testing lead and copper in drinking water.

Lead is analyzed by one of two methods. The more commonly run method is 200.8 which utilizes Inductively Coupled Plasma Mass Spectrometry. The second method is Standard Methods 3113B, which utilizes Electrothermal Atomic Absorption Spectrometry. This method is more commonly used to confirm results from the ICP-MS, but can also be used to run production samples.

Copper is analyzed by one of two methods. The method used is dependent on the other metals that may be needed in addition to copper, this is to improve efficiency of runs. EPA method 200.8 is often used when analyzing lead and copper samples, so samples can be run simultaneously. Copper can also be analyzed using 200.7 which utilizes Inductively Coupled Plasma Atomic Emission Spectrometry.

National Testing Laboratories runs thousands of samples each year for Lead and Copper to meet various regulations and client requirements. We have been in business for Regulations include FHA and VA loans, FDA requirements and the Lead and Copper rule under the Safe Drinking Water Act.

800-458-3330



www.ntllabs.com

Corporate Headquarters: 6571 Wilson Mills Road, Cleveland, Ohio 44143 • Phone: 440-449-2525 • Fax: 440-449-8585

Testing Facility: National Testing Laboratory, Ltd., 556 South Mansfield Street, Ypsilanti, MI 48197