

Lead/Copper Water Sampling Report

For

Plymouth Education Center

May 5, 2016



Plymouth Education Center
Lead/Copper Water Sampling Report

Background:

In May, 2016, Mr. Roger Simmons, Building Facilities Director for Plymouth Education Center contacted Nova Environmental, Inc. and requested that lead water samples be collected within two buildings under the jurisdiction of the Plymouth Education Center. Upon discussion, it was determined to conduct testing for copper also. Since this water testing is for screening purposes, it was determined that three samples be collected within each building. The location of the testing was from interior taps from which water is typically drawn for consumption. This would include, but is not limited to the Kitchen within each building.

Sampling Methodology:

On Thursday, May 5th, 2016, an environmental consultant from Nova Environmental, Inc. conducted the water sample collection within the applicable buildings. The water samples were collected “first draw” which means that the tap was not flushed prior to sample collection. Additional samples were collected after a 30 second flush but these samples were not analyzed unless the first draw sample was determined to be above the applicable action level. 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 either in the early morning or on the weekend 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 within the Plymouth Education Center buildings 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 the Plymouth Education Center buildings. Therefore, this report was not intended to or should not be construed to provide any type of regulatory compliance. Furthermore, the sampling from three 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 building 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.

PEC

Sample ID - Primary	Lead	Copper	Sample ID - Flush	Lead	Copper	Location
188767 - P	ND	0.075 mg/L	188774 - F	N/A	N/A	Drinking Fountain, Across from 102A
188768 - P	ND	0.054 mg/L	188778 - F	N/A	N/A	Drinking Fountain, Near Room 223
188770 - P	ND	0.530 mg/L	188775 - F	N/A	N/A	Main Faucet, Kitchen

Matrix

Sample ID - Primary	Lead	Copper	Sample ID - Flush	Lead	Copper	Location
18772 - P	ND	0.320 mg/L	188777 - F	N/A	N/A	Lower Drinking Fountain, Near Restrooms
188771 - P	ND	0.320 mg/L	188776 - F	N/A	N/A	Upper Drinking Fountain, Near Restrooms
188769 - P	ND	0.480 mg/L	188773 - F	N/A	N/A	Main Faucet, Kitchen

ND = None Detected at Reporting Limit

Federal Action Level for Drinking Water: Lead 0.015 mg/L Copper 1.3 mg/L
mg/L = milligrams/Liter (ppm)

National Testing Laboratories, Ltd556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585**ANALYTICAL REPORTS****SAMPLE CODE: 354399****5/11/2016****Customer:** Nova Environmental Inc.
Kary Amin
5300 Plymouth Road
Ann Arbor, MI 48105**Source:** Plymouth Ed. Center 188767-P
Source City: Detroit
Source State: MI**Date/Time Received:** 5/5/2016 14:00**Collected by:** K. Amin

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:**

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
Inorganic Analytes - Metals										
1022	Copper	200.8	1.0	mg/L	0.002	0.075	1	5/5/2016 06:00		5/10/2016
1030	Lead	200.8	0.015	mg/L	0.001	ND	1	5/5/2016 06:00		5/10/2016

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

Analyst	Tests
EC	200.8



James Abston, Operations Manager

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National Testing Laboratories, Ltd556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585**ANALYTICAL REPORTS****SAMPLE CODE: 354401****5/11/2016****Customer:** Nova Environmental Inc.
Kary Amin
5300 Plymouth Road
Ann Arbor, MI 48105**Source:** Plymouth Ed. Center 188768-P
Source City: Detroit
Source State: MI**Date/Time Received:** 5/5/2016 14:00**Collected by:** K. Amin

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:

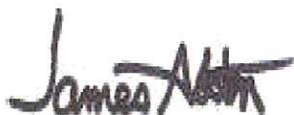
Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

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Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
Inorganic Analytes - Metals										
1022	Copper	200.8	1.0	mg/L	0.002	0.054	1	5/5/2016 06:05		5/10/2016
1030	Lead	200.8	0.015	mg/L	0.001	ND	1	5/5/2016 06:05		5/10/2016

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556 South Mansfield, Ypsilanti, MI, 48197-5166

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

ANALYTICAL REPORTS**SAMPLE CODE: 354403****5/11/2016**

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

Source: Plymouth Ed. Center 188770-P
Source City: Detroit
Source State: MI

Date/Time Received: 5/5/2016 14:00**Collected by:** K. Amin

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:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
Inorganic Analytes - Metals										
1022	Copper	200.8	1.0	mg/L	0.002	0.530	1	5/5/2016 06:11		5/10/2016
1030	Lead	200.8	0.015	mg/L	0.001	ND	1	5/5/2016 06:11		5/10/2016

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National Testing Laboratories, Ltd556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585**ANALYTICAL REPORTS****SAMPLE CODE: 354405****5/11/2016****Customer:** Nova Environmental Inc.
Kary Amin
5300 Plymouth Road
Ann Arbor, MI 48105**Source:** Plymouth Ed. Center 188772-P
Source City: Detroit
Source State: MI**Date/Time Received:** 5/5/2016 14:00**Collected by:** K. Amin

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:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
Inorganic Analytes - Metals										
1022	Copper	200.8	1.0	mg/L	0.002	0.320	1	5/5/2016 06:17		5/10/2016
1030	Lead	200.8	0.015	mg/L	0.001	ND	1	5/5/2016 06:17		5/10/2016

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National Testing Laboratories, Ltd556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585**ANALYTICAL REPORTS****SAMPLE CODE: 354407****5/11/2016****Customer:** Nova Environmental Inc.
Kary Amin
5300 Plymouth Road
Ann Arbor, MI 48105**Source:** Plymouth Ed. Center 188771-P
Source City: Detroit
Source State: MI**Date/Time Received:** 5/5/2016 14:00**Collected by:** K. Amin

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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Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
Inorganic Analytes - Metals										
1022	Copper	200.8	1.0	mg/L	0.002	0.320	1	5/5/2016 06:18		5/10/2016
1030	Lead	200.8	0.015	mg/L	0.001	ND	1	5/5/2016 06:18		5/10/2016

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National Testing Laboratories, Ltd556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585**ANALYTICAL REPORTS****SAMPLE CODE: 354409****5/11/2016****Customer:** Nova Environmental Inc.
Kary Amin
5300 Plymouth Road
Ann Arbor, MI 48105**Source:** Plymouth Ed. Center 188769-P
Source City: Detroit
Source State: MI**Date/Time Received:** 5/5/2016 14:00**Collected by:** K. Amin

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:

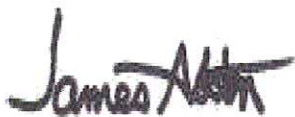
Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

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Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
Inorganic Analytes - Metals										
1022	Copper	200.8	1.0	mg/L	0.002	0.480	1	5/5/2016 06:22		5/10/2016
1030	Lead	200.8	0.015	mg/L	0.001	ND	1	5/5/2016 06:22		5/10/2016

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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

Greg 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 NELAC 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