

February 27, 2017

David Spacone
City School District of the City of Niagara Falls
Director of Facilities
630 – 66th Street
Niagara Falls, NY 14304

Re: Follow-Up Sampling of Drinking Water for Lead Concentrations

Dear Mr. Spacone:

Included with this letter is Stohl Environmental LLC's report for the follow-up Water Sampling performed at the educational buildings of the City School District of the City of Niagara Falls:

- Cataract Elementary School, 6431 Girard Avenue, Niagara Falls, New York

This report is prepared to assist the District in complying with the requirements of NYS regulations, *SUBPART 67-4: Lead Testing in School Drinking Water*, by identifying the sources of potable water with lead concentrations greater than the NYS "Action Level of 15 parts per billion (ppb)".

Initial Sampling and Analysis: In Compliance with NYS regulations, initial first draw water sampling was completed on 9/24/2016 and 6 samples were identified as containing lead concentrations above the NYS Action Level of 15 ppb.

Mitigation by District and Follow-up Sampling by Stohl Environmental LLC:

- Following the receipt of initial sampling results, in accordance with guidance received from NYS, the District is reported to have prohibited use of the outlets analyzed as above the NYS Action Level of 15 ppb until "(1) a lead remediation plan is implemented... and (2) test results indicate that the lead levels are at or below the action level".
- Subsequent to reported mitigation by the District, Stohl Environmental LLC was requested to perform follow-up sampling and laboratory analysis.
- Follow-up sampling was performed by Stohl Environmental LLC in accordance with the requirements and protocols outlined in NYS regulations, as well as USEPA Technical Guidance Document "3-T's for Reducing Lead in Drinking Water in Schools".

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Results of Follow-up Sampling: As further detailed in Section 1.2 (*Executive Summary*) of the accompanying report, based upon the follow-up sampling and analysis performed, the following is reported:

- **Follow-up First Draw Samples:** Following remediation by the District, or for confirmatory purposes, 6 outlets were re-sampled on 11/8/2016 and analyzed by a certified and independent laboratory. **Of the 6 samples collected, 2 contained lead concentrations above the action level.**

Interpretation of First Draw Sampling Results: Under NYSDOH regulations Section 67-4.4, for the one outlet that continues to have First Draw test results above the NYS action level, the District must “prohibit use of the outlet until lead remediation is implemented and (First Draw) test results indicate that lead levels are at or below the action level.”


- **Flush Samples:** As additional confirmation of lead concentrations, and in an attempt to determine whether lead concentrations above the action level result from the outlet/fixture or from the plumbing to the outlet, 6 flush samples were also collected from these same outlets on 11/8/2016 and submitted to and analyzed by a certified and independent laboratory. **Of the 6 samples collected, none contained lead concentrations above the action level.**

Interpretation of Flush Sampling Results: As detailed in EPA guidance (“3T’s for Reducing Lead in Drinking Water in Schools”), *“If initial test results reveal lead concentrations greater than (the action level) for a given outlet, follow-up flush testing... is recommended to determine if the lead contamination results are from the fixture or from the plumbing.”*

Based upon this guidance, two outlets tested on 11/8/2016 continue to have First Draw Sample lead concentrations above the action level; the Flush Sample results infer that the source of lead at these outlets is the fixture, rather than the plumbing to the fixture.

Thank you for the opportunity to be of service to City School District of the City of Niagara Falls.

Sincerely,
Stohl Environmental, LLC.



William K. Sisco
Senior Project Manager

**Follow-Up Investigation and Sampling
Of Sources of Potable Water
For Lead Concentrations**

Prepared for:

**David Spacone
City School District of the City of Niagara Falls
Director of Facilities
630 – 66th Street
Niagara Falls, NY 14304**

Prepared by:



ENVIRONMENTAL CONSULTANTS - A MEMBER OF THE STOHL GROUP OF COMPANIES

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Conditions as of November 7, 2016



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Summary Tabulation

Lead in Drinking Water Investigation

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- 1.2. Executive Summary of Sampling and Analysis
- 1.3. Response Actions Required Under NYS Regulations
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1.1 Sampling Protocol and Summary of Results:

Stohl Environmental was retained by City School District of the City of Niagara Falls to perform follow-up sampling and analysis of potable water outlets that were identified in report dated 10/31/2017 as having lead concentrations greater than the NYS action level of 15 ppb. Sampling was performed in the following buildings:

- Cataract Elementary School, 6431 Girard Avenue, Niagara Falls, New York

Scope of Work:

Stohl Environmental was charged with collecting follow-up water samples from outlets which previously were analyzed as having lead concentrations above 15 ppb in Cataract Elementary School. Outlets are defined in NYS regulations as: "a potable water fixture currently or potentially used for drinking or cooking purposes, including but not limited to a bubbler, drinking fountain, or faucets".

Sampling Protocol:

In accordance with NYS regulations, *Subpart 67-4: Lead Testing in School Drinking Water*, and the EPA guidance document, *'3Ts for Reducing Lead in Drinking Water in Schools'*, Stohl Environmental's protocol can be summarized as follows:

- **Follow-up Samples** were collected to verify initial findings of lead contaminations, to assist in problem assessment to determine remediation, and/or verify that lead levels are at or below action level post-remediation. Confirmatory samples were collected as follows:
 - **Follow-up First-Draw samples** of 250 milliliters (mL) were collected from cold water outlets before any water was used. Sampling was coordinated with District representatives to assure that water was motionless in the pipes for a minimum of 8 hours, but not more than 18 hours before sample collection.
 - **To supplement follow-up first draw samples, in some instances, Flush samples** of 250 mL were collected from cold water outlets after the outlet was run for 30 seconds before any water was used or following a second first-draw sample at the same outlet. Sampling was coordinated with District representatives to assure that water was motionless in the pipes for a minimum of 8 hours, but not more than 18 hours before sample collection.
 - **Laboratory Analysis:** Samples were submitted following strict chain-of-custody protocols to an independent laboratory approved by the NYS Department of Health's Environmental Laboratory Approval Program (ELAP).

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1.2 Executive Summary of Sampling and Analysis:

Total Number of Samples Collected by Building Classified by Initial First Draw & Follow-up Samples

Building Name	Date of Sample Events	Total Number Samples Collected	Initial First Draw Samples		Follow-up Samples			
			Analyzed at or Below Action Level of 15 ppb	Analyzed Above Action Level of 15 ppb	First Draw Samples		Flush Samples	
					Analyzed at or Below Action Level of 15 ppb	Analyzed Above Action Level of 15 ppb	Analyzed at or Below Action Level of 15 ppb	Analyzed Above Action Level of 15 ppb
Cataract Elementary School	9/24/2016, and 11/7/2016	74	56	6	4	2	6	0

** Follow-up samples are samples collected subsequent to "Step 1" First Draw samples to verify initial findings of lead contamination, to assist in problem assessment to determine remediation and/or verify that lead levels are at or below action level post-remediation.



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Sample Results: Initial First Draw, Follow-up First Draw and Flush Samples

Sample #	Sample Type (Initial First Draw, Follow-up First Draw or Flush)	Sample Location	Fixture/Outlet type	Laboratory Analysis in ppb
111.2-6	First Draw	Kitchen, Hand Washing Sink	Sink	22.0
111.2-6-1F	Flush	Kitchen, Hand Washing Sink	Sink	<5.00
111.2-6-1R	Follow-Up First Draw	Kitchen, Hand Washing Sink	Sink	9.31
111.2-9	First Draw	Cafeteria, Drinking Fountain	Drinking Fountain	29.4
111.2-9-1F	Flush	Cafeteria, Drinking Fountain	Drinking Fountain	<5.00
111.2-9-1R	Follow-Up First Draw	Cafeteria, Drinking Fountain	Drinking Fountain	<5.00
111.2-51	First Draw	Hall, Outside Room 184	Drinking Fountain	40.0
111.2-51-1F	Flush	Hall, Outside Room 184	Drinking Fountain	<5.00
111.2-51-1R	Follow-Up First Draw	Hall, Outside Room 184	Drinking Fountain	<5.00
111.2-58	First Draw	Exterior, Outside Room 120	Hose Bib	20.5
111.2-58-1F	Flush	Exterior, Outside Room 120	Hose Bib	<5.00
111.2-58-1R	Follow-Up First Draw	Exterior, Outside Room 120	Hose Bib	<5.00
111.2-59	First Draw	Exterior, Outside Main Entrance	Hose Bib	380
111.2-59-1R	Follow-Up First Draw	Exterior, Outside Main Entrance	Hose Bib	56.6
111.2-59-1F	Flush	Exterior, Outside Main Entrance	Hose Bib	<5.00
111.2-60	First Draw	Exterior, Outside Room 178	Hose Bib	128
111.2-60-1R	Follow-Up First Draw	Exterior, Outside Room 178	Hose Bib	19.3
111.2-60-1F	Flush	Exterior, Outside Room 178	Hose Bib	<5.00

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1.3 Response Actions Required Under NYS Regulations, Section 67-4.4:

For outlets analyzed with a lead concentration in excess of the NYS Action Level, regulations require:

- (a) Prohibit use of the outlet until:
 - (1) a lead remediation plan is implemented to mitigate the lead level of such outlet; and
 - (2) test results indicate that the lead levels are at or below the action level;
- (b) Provide building occupants with an adequate supply of potable water for drinking and cooking until remediation is performed;
- (c) Report the test results to the local health department as soon as practicable, but no more than 1 business day after the school received the laboratory report; and
- (d) Notify all staff and all persons in parental relation to students of the test results, in writing, as soon as practicable but no more than 10 business days after the school received the laboratory report.



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1.4 Laboratory Analytical Reports by Building



Analysis Report

Schneider Laboratories Global, Inc

2512 W. Cary Street • Richmond, Virginia • 23220-5117
804-353-6778 • 800-785-LABS (5227) • Fax 804-359-1475

Customer: Stohl Environmental, LLC (4507)
Address: 4169 Allendale Parkway
Blasdell, NY 14219

Order #: 192731

Matrix: Drinking Water
Received: 11/18/16
Reported: 02/23/17

Attn:
Project: Cataract Elem
Location: 6431 Girard Ave, Nigara Falls
Number: 2016L-111.2

PO Number:

Table with columns: Sample ID, Cust. Sample ID, Location, Method, Result, RL*, Units, Analysis Date, Analyst. Contains 11 rows of lead analysis data for various sample IDs (192731-001 to 192731-011) with results ranging from <5.00 to 56.6 µg/L.

All internal QC parameters were met. Unusual sample conditions, if any, are described. Surrogate Spike results designated with "D" indicate that the analyte was diluted out. "MI" indicates matrix interference. Concentration and *Reporting Limit (RL) based on areas provided by client. Values are reported to three significant figures. Solid PPM = mg/kg | PPB = µg/kg and Water PPM = mg/L | PPB = µg/L. The test results reported relate only to the samples submitted.



Analysis Report

Schneider Laboratories Global, Inc

2512 W. Cary Street • Richmond, Virginia • 23220-5117
804-353-6778 • 800-785-LABS (5227) • Fax 804-359-1475

Customer: Stohl Environmental, LLC (4507)
Address: 4169 Allendale Parkway
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Order #: 192731

Matrix: Drinking Water
Received: 11/18/16
Reported: 02/23/17

Attn:
Project: Cataract Elem
Location: 6431 Girard Ave, Nigara Falls
Number: 2016L-111.2

PO Number:

Table with columns: Sample ID, Cust. Sample ID, Location, Method, Result, RL*, Units, Analysis Date, Analyst. Row 1: 192731-012, 111.2-60-1R, Outside 178, EPA 200.9 Rev 2.2, 19.3, 5.00, µg/L, 02/21/17, SA.

192731-02/23/17 03:37 PM

Abisola O Kasali

Reviewed By: Abisola Kasali
Metals Supervisor

EPA Regulatory Limits

Table with columns: Parameter, Reg. Limit, Unit. Row 1: Lead, 15.0, µg/L

Certifications

Table with columns: Parameter, Method, Matrix, CA, CT, FL, ND, NJ, NY, RI, VA. Row 1: Lead, EPA 200.9 Rev 2.2, Drinking Water, X, X, X, X, X, X, X, X

Key

Table with columns: State, Regulatory Agency - Lab ID, Certificate Number. Rows for CA, CT, FL, ND, NJ, NY, RI, VA.

'X' indicates that the analyte is accredited.

If your state is not listed above, call laboratory for accreditation/certification information.

All internal QC parameters were met. Unusual sample conditions, if any, are described. Surrogate Spike results designated with "D" indicate that the analyte was diluted out. "MI" indicates matrix interference. Concentration and *Reporting Limit (RL) based on areas provided by client. Values are reported to three significant figures. Solid PPM = mg/kg | PPB = µg/kg and Water PPM = mg/L | PPB = µg/L. The test results reported relate only to the samples submitted.



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1.5 Laboratory Certifications

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017
Issued September 22, 2016

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. FAYEZ ABOUZAKI
SCHNEIDER LABORATORIES GLOBAL, INC
2512 WEST CARY STREET
RICHMOND, VA 23220-5117

NY Lab Id No: 11413

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES POTABLE WATER
All approved analytes are listed below:*

Metals I

Lead, Total

EPA 200.9 Rev. 2.2



Serial No.: 55043

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.



NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017
Issued April 01, 2016

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. FAYEZ ABOUZAKI
SCHNEIDER LABORATORIES GLOBAL, INC
2512 WEST CARY STREET
RICHMOND, VA 23220-5117

NY Lab Id No: 11413

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved analytes are listed below:*

Metals I

Lead, Total
EPA 200.7 Rev. 4.4
EPA 6010C
EPA 7000B
EPA 200.9 Rev. 2.2

Sample Preparation Methods

EPA 3010A
EPA 3005A
EPA 3020A

NEW
YORK
STATE

Department
of Health

Serial No.: 54667

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



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Issued April 01, 2016

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2512 WEST CARY STREET
RICHMOND, VA 23220-5117

NY Lab Id No: 11413

*is hereby APPROVED as an Environmental Laboratory in conformance with the
National Environmental Laboratory Accreditation Conference Standards (2003) for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved analytes are listed below:*

Characteristic Testing

TCLP EPA 1311

Polychlorinated Biphenyls

PCB-1268 EPA 8082A

Metals I

Sample Preparation Methods

Barium, Total EPA 6010C

EPA 3010A

Cadmium, Total EPA 6010C

EPA 3050B

Chromium, Total EPA 6010C

EPA 3550C

Lead, Total EPA 6010C

EPA 3031

EPA 7000B

Nickel, Total EPA 6010C

Silver, Total EPA 6010C

Metals II

Antimony, Total EPA 6010C

Arsenic, Total EPA 6010C

Chromium VI EPA 7196A

Mercury, Total EPA 7471B

Selenium, Total EPA 6010C

Polychlorinated Biphenyls

PCB-1016 EPA 8082A

PCB-1221 EPA 8082A

PCB-1232 EPA 8082A

PCB-1242 EPA 8082A

PCB-1248 EPA 8082A

PCB-1254 EPA 8082A

PCB-1260 EPA 8082A

PCB-1262 EPA 8082A

NEW
YORK
STATE

Department
of Health

Serial No.: 54668

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



Expires 12:01 AM April 01, 2017
Issued April 01, 2016

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. FAYEZ ABOUZAKI
SCHNEIDER LABORATORIES GLOBAL, INC
2512 WEST CARY STREET
RICHMOND, VA 23220-5117

NY Lab Id No: 11413

*is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:*

Miscellaneous

Asbestos in Friable Material	EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Lead in Dust Wipes	EPA 7000B
Lead in Paint	EPA 7000B

Sample Preparation Methods

EPA 3050B



Serial No.: 54669

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NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER



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MR. FAYEZ ABOUZAKI
SCHNEIDER LABORATORIES GLOBAL, INC
2512 WEST CARY STREET
RICHMOND, VA 23220-5117

NY Lab Id No: 11413

*is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES AIR AND EMISSIONS
All approved subcategories and/or analytes are listed below:*

Metals I

Lead, Total NIOSH 7082
40 CFR PART 50 1984 APP G

Miscellaneous

Fibers NIOSH 7400 A RULES



Serial No.: 54670

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1.6 Chains of Custody



Chain of Custody Document

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Submitted to: (Lab Name) SLC
 STOHL Job # 2016L-111.02

Client: Niagara Falls CSD Contact: Dave Spucore
 Building: Cataract Elevator Location: 6431 Girard Ave, Niagara Falls, NY

LEAD
 Water by AAS-GF: ASTM D3559-03D, US EPA 200.9 X Turnaround 5 Days

Sample #	Location	Outlet Type	Time	Cooler Model	Lab ID	Results
111.2-6-1F	Kitchen	S	06:50			
111.2-6-1R	Kitchen	S	06:50			
111.2-9-1F	Cafeteria	DF	06:51	LESEA-8-1A		
111.2-9-1R	Cafeteria	DF	06:51	LDSEA-8-1A		
111.2-51-1F	Hall outside 184	DF	06:55	LDSEA-8-1A		
111.2-51-1R	Hall outside 184	DF	06:55	LDSEA-8-1A		
111.2-58-1F	outside 120	HB	07:05			
111.2-58-1R	outside 120	HB	07:05			
111.2-59-1F	outside main ent	HB	07:08			
111.2-59-1R	outside main ent	HB	07:08			
111.2-60-1F	outside 178	HB	07:10			
111.2-60-1R	outside 178	HB	07:10			

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Notes:
 Please e-mail lab results to labs@stohlenv.com If checked, also e-mail results to: _____

Sampled By: Sean Haulcy Print Name: Sean Haulcy Stohl Env: Sean Haulcy Date: 11/8/16
 Relinquished By: [Signature] Print Name: Joe Mucci Stohl Env: Joe Mucci Date: 11/9/16
 Received (Name / Lab): _____ Date: _____ Time: _____
 Sample Login (Name / Lab): _____ Date: _____ Time: _____
 Analysis (Name / Lab): _____ Date: _____ Time: _____
 QA/QC Review (Name / Lab): _____ Date: _____ Time: _____
 Archived / Released: _____ QA/QC InterLAB Use: _____ Date: _____ Time: _____