The Lotis Engineering Group, P.C.

6465 Transit Road – Suite 23
East Amherst, New York 14051-2232
716.276.8707

January 23, 2016

Jamie Phillips
Lancaster Central School District
177 Central Avenue
Lancaster, New York 14086

Re: Lead Testing in School Drinking Water – Sampling Event 3
Court Street Elementary School
91 Court Street
Lancaster, NY 14086

Dear Ms. Phillips:

On September 6, 2016, Governor Andrew M. Cuomo signed legislation (S.8158/A.10740) mandating that public schools in New York State test potable water for lead contamination. The New York State Department of Health (NYSDOH) also issued emergency regulations pursuant to the new legislation (NYCRR Title X, Subpart 67-4).

In accordance with the new law and regulations, Lancaster Central School District (District) contracted The Lotis Engineering Group, P.C. (Lotis), to complete water testing in all District buildings. This submission summarizes the analytical results of a resampling event completed on December 15, 2016 at Court Street Elementary School.

Per the emergency regulations issued by the NYSDOH, first-draw samples were collected from cold water outlets after water lay motionless in the pipes for a minimum of 8 hours, but not more than 18 hours. The school district was responsible for flushing outlets at least 8 hours prior to sample collection. Lotis was notified by the school district that flushing was completed over 8 hours prior to sampling. However, this could not be independently verified by Lotis.

Samples were collected by placing a sterile container under each outlet and turning on the water source, allowing Lotis to collect a first-draw cold water sample. Samples were collected in clean 250 mL containers containing the appropriate nitric acid preservative, as provided by the testing laboratory. Samples were then delivered to Microbac Laboratories (a certified Environmental Laboratory Approved Program) following standard chain of custody protocols.

A total of 10 outlets, identified by the District, were sampled inside the building on December 15, 2016.

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At Court Street Elementary School, 8 samples exceeded the 15 parts per billion (ppb) action level set forth by the NYSDOH. A summary of these samples is included in the following table:

Table 1 – Samples Exceeding 15 ppb

Sample ID	Location Details	Results (ppb)
1-CES-Kitchn-Bath-S1	Kitchen Bathroom Sink Faucet	601
2-CES-Girls PE Office	Girls PE Teachers Office Sink Faucet	127
3-CES-103-Sink	Room 103 – Sink Faucet	25.3
4-CES-107-S	Room 107 – Sink Faucet	16.7
5-CES-118B-Center Sink	Room 188B – Center Sink Faucet	34.6
6-CES-122-S	Room 122 – Sink Faucet	31.7
9-CES-132-Bubbler	Room 132 - Bubbler	16.6
10-CES-Gym Hall Bubbler Pink	Hallway near gym – Pink Bubbler	15.3

Included in this submission are the complete laboratory analytical reports, chain of custody logs and photos of sample locations that exceeded the action levels.

In accordance with the new legislation, use of the aforementioned outlets is prohibited until a lead remediation plan is implemented and new testing demonstrates that the resulting lead levels are below 15 ppb. Alternative water supplies may be necessary in impacted areas. The legislation requires that Lancaster Central School District provide these results to the NYSDOH within one business day of receipt. Further, notification to building staff, all persons in parental relation to students, the local health department and the State Education Department is required within 10 business days of receipt of these results. These results and any associated remedial plans must be posted on the District's website within six weeks of receipt and all records must be retained by the District for at least 10 years.

The NYSDOH recommends reviewing "3Ts for Reducing Lead in Drinking Water in Schools, Revised Technical Guidance" published by the United States Environmental Protection Agency (USEPA) to assist schools in assessing an appropriate remediation plan. A copy of this publication can be reviewed through the following hyperlink 3Ts for Reducing Lead in Drinking Water in Schools.

Lotis is available at your convenience to discuss this issue further.

Sincerely,

Kelly Reidy
Environmental Scientist

David N. Robinson, P.E.
President/CEO

Laboratory Analytical Results

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December 27, 2016

The Lotis Engineering Group, P.C.
6465 Transit Road - Suite 23
East Amherst, NY 14051-2232

Work Order No.: 16L1157

Re: CES

Dear Kelly Reidy:

Microbac Laboratories, Inc. - Chicagoland Division received 10 sample(s) on 12/19/2016 10:55:00AM for the analyses presented in the following report as Work Order 16L1157.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Robert Crookston, Managing Director, at robert.crookston@microbac.com.

Sincerely,
Microbac Laboratories, Inc.

Karen Ziolkowski
Senior Project Manager

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WORK ORDER SAMPLE SUMMARY

Date: *Tuesday, December 27, 2016*

Client: The Lotis Engineering Group, P.C.
Project: CES
Lab Order: 16L1157

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
16L1157-01	1-CES-Kitchn-Bath-S1		12/15/2016 06:05	12/19/2016 10:55:00AM
16L1157-02	2-CES-Girls PE Office		12/15/2016 06:06	12/19/2016 10:55:00AM
16L1157-03	3-CES-103-Sink		12/15/2016 06:10	12/19/2016 10:55:00AM
16L1157-04	4-CES-107-S		12/15/2016 06:10	12/19/2016 10:55:00AM
16L1157-05	5-CES-118B-Center Sink		12/15/2016 06:11	12/19/2016 10:55:00AM
16L1157-06	6-CES-122-S		12/15/2016 06:12	12/19/2016 10:55:00AM
16L1157-07	7-CES-125-S1		12/15/2016 06:14	12/19/2016 10:55:00AM
16L1157-08	8-CES-127-S1		12/15/2016 06:18	12/19/2016 10:55:00AM
16L1157-09	9-CES-132-Bubbler		12/15/2016 06:20	12/19/2016 10:55:00AM
16L1157-10	10-CES-Gym Hall Bubbler Pink		12/15/2016 06:21	12/19/2016 10:55:00AM

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Analytical Results

Date: *Tuesday, December 27, 2016*

Client:	The Lotis Engineering Group, P.C.	***Work Order:***	16L1157
Client Project:	CES	***Received:***	12/19/2016 10:55

Analyses	Certs	Result	Units	Qual	Analyzed	Tech	Method
01 1-CES-Kitchn-Bath-S1							*Collected: 12/15/2016 06:05*
Lead	gdmnoi	***601***	ug/L	E	12/21/2016 16:05	RPL	EPA 200.8 Rev 5.4
02 2-CES-Girls PE Office							*Collected: 12/15/2016 06:06*
Lead	gdmnoi	***127***	ug/L	E	12/21/2016 16:06	RPL	EPA 200.8 Rev 5.4
03 3-CES-103-Sink							*Collected: 12/15/2016 06:10*
Lead	gdmnoi	***25.3***	ug/L		12/21/2016 16:07	RPL	EPA 200.8 Rev 5.4
04 4-CES-107-S							*Collected: 12/15/2016 06:10*
Lead	gdmnoi	***16.7***	ug/L		12/21/2016 16:09	RPL	EPA 200.8 Rev 5.4
05 5-CES-118B-Center Sink							*Collected: 12/15/2016 06:11*
Lead	dgimno	***34.6***	ug/L		12/23/2016 15:40	RPL	EPA 200.8 Rev 5.4
06 6-CES-122-S							*Collected: 12/15/2016 06:12*
Lead	gdmnoi	***31.7***	ug/L		12/21/2016 16:14	RPL	EPA 200.8 Rev 5.4
07 7-CES-125-S1							*Collected: 12/15/2016 06:14*
Lead	gdmnoi	***3.42***	ug/L		12/21/2016 16:15	RPL	EPA 200.8 Rev 5.4
08 8-CES-127-S1							*Collected: 12/15/2016 06:18*
Lead	gdmnoi	***9.32***	ug/L		12/21/2016 16:16	RPL	EPA 200.8 Rev 5.4
09 9-CES-132-Bubbler							*Collected: 12/15/2016 06:20*
Lead	gdmnoi	***16.6***	ug/L		12/21/2016 16:17	RPL	EPA 200.8 Rev 5.4
10 10-CES-Gym Hall Bubbler Pink							*Collected: 12/15/2016 06:21*
Lead	gdmnoi	***15.3***	ug/L		12/21/2016 16:18	RPL	EPA 200.8 Rev 5.4

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FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

B = Detected in the associated method Blank at a concentration above the routine RL
b- = Detected in the associated method Blank at a concentration greater than 2.2 times the MDL
b* = Detected in the associated method Blank at a concentration greater than half the RL
CFU = Colony forming units
D = Dilution performed on sample
DF = Dilution Factor
g = Gram
E = Value above quantitation range
H = Analyte was prepared and/or analyzed outside of the analytical method holding time
I = Matrix Interference
J = Analyte concentration detected between RL and MDL (Metals / Organics)
LOD = Limit of Detection
LOQ = Limit of Quantitation
m3 = Meters cubed
MDL = Method Detection Limit
mg/Kg = Milligrams per Kilogram (ppm)
mg/L = Milligrams per Liter (ppm)
NA = Not Analyzed
ND = Not Detected at the Reporting Limit (or the Method Detection Limit, if used)
NR = Not Recovered
R = RPD outside accepted recovery limits
RL = Reporting Limit
S = Spike recovery outside recovery limits
Surr = Surrogate
U = Undetected
> = Greater than
< = Less than
% = Percent
* = Result exceeds project specific limits

ANALYTE TYPES: (AT)

A,B = Target Analyte
I = Internal Standard
M = Summation Analyte
S = Surrogate
T = Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

BLK = Method Blank
DUP = Method Duplicate
BS = Method Blank Spike
MS = Matrix Spike
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
CRL = Client Required Reporting Limit
PDS = Post Digestion Spike
QCS = Quality Control Standard
ICSA = Interference Check Standard "A"
ICSAB = Interference Check Standard "AB"
BSD = Method Blank Spike Duplicate
MSD = Matrix Spike Duplicate
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
OPR = Ongoing Precision and Recovery Standard
SD = Serial Dilution

CERTIFICATIONS (Certs)

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

[d] Illinois EPA drinking water, wastewater and solid waste analysis (#200064)
[g] Indiana SDH chemical analysis of drinking water (#C-45-03)
[i] Kansas Dept Health & Env. NELAP (#E-10397)
[m] New York State Department of Health Wadsworth (#12006)
[n] Pennsylvania Department of Environmental Protect (#68-04863)
[o] Virginia Department of General Services Division of Consolidated Laboratory Services (#7990)

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COOLER INSPECTION

Date: Tuesday, December 27, 2016

Client Name: The Lotis Engineering Group, P.C.

Date/Time Received: 12/19/2016 10:55

Work Order Number: 16L1157

Received by: Nicole Rainwater

Checklist completed by: 12/20/2016 2:50:00PM | Dave Bryant

Reviewed by: 12/27/2016 | KAZ

Carrier Name: UPS

Cooler ID: Default Cooler

Container/Temp Blank Temperature: -0.8° C

After-Hour Arrival?	Yes	☐	No	☑		
Shipping container/cooler in good condition?	Yes	☑	No	☐	Not Present	☐
Custody seals intact on shipping container/cooler?	Yes	☐	No	☐	Not Present	☑
Custody seals intact on sample containers?	Yes	☐	No	☐	Not Present	☑
COC present?	Yes	☑	No	☐		
COC included sufficient client identification?	Yes	☑	No	☐		
COC included sufficient sample collector information?	Yes	☐	No	☑		
COC included a sample description?	Yes	☑	No	☐		
COC agrees with sample labels?	Yes	☑	No	☐		
COC identified the appropriate matrix?	Yes	☑	No	☐		
COC included date of collection?	Yes	☑	No	☐		
COC included time of collection?	Yes	☑	No	☐		
COC identified the appropriate number of containers?	Yes	☐	No	☑		
Samples in proper container/bottle?	Yes	☑	No	☐		
Sample containers intact?	Yes	☑	No	☐		
Sufficient sample volume for indicated test?	Yes	☑	No	☐		
All samples received within holding time?	Yes	☑	No	☐		
If the samples are preserved, are the preservatives identified?	Yes	☑	No	☐		

If No, adjusted by? _____

COC included the requested analyses?	Yes	☑	No	☐		
COC signed when relinquished and received?	Yes	☑	No	☐		
Samples received on ice?	Yes	☐	No	☑		
Samples properly preserved?	Yes	☑	No	☐		
Voa vials for aqueous samples have zero headspace?	Yes	☐	No	☐	No VOA vials submitted	☑

Cooler Comments:

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.

Sample ID	Client Sample ID	Comments
16L1157-01	1-CES-Kitchn-Bath-S1	
16L1157-02	2-CES-Girls PE Office	
16L1157-03	3-CES-103-Sink	
16L1157-04	4-CES-107-S	
16L1157-05	5-CES-118B-Center Sink	
16L1157-06	6-CES-122-S	
16L1157-07	7-CES-125-S1	
16L1157-08	8-CES-127-S1	
16L1157-09	9-CES-132-Bubbler	
16L1157-10	10-CES-Gym Hall Bubbler Pink	

16L1157

SampleID	Matrix	SampleName	SampleAlias	Sampled	SampledBy	
1	Aqueous	[redacted]				-01
2	Aqueous					-02
3	Aqueous					-03
4	Aqueous					-04
5	Aqueous					-05
6	Aqueous					-06
7	Aqueous					-07
8	Aqueous					-08
9	Aqueous					-09
10	Aqueous					-10

UPS

Rec @ Lab: Nicole Reinwald 12-19-16 @ 1055

NI -0.8
-0.0
-0.8 °C