

The Lotis Engineering Group, P.C.

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

January 3, 2016

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

Re: Lead Testing in School Drinking Water – Sampling Event 2, 3 and 4
Lancaster High School
1 Forton Drive
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 November 4, 2016, December 8, 2016 and December 12, 2016 at Lancaster High 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.

Eight outlets, identified by the District, were sampled inside the building on November 4, 2016. An additional 3 outlets, identified by the District, were sampled inside the building on December 8, 2016. Lastly, one outlet, identified by the District, was sampled inside the building on December 12, 2016. A total of 12 outlets were sampled during these three sampling events.

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At Lancaster High School, 2 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

Date Sampled	Sample ID	Location Details	Results (ppb)
11/4/2016	13-LHS-GLR-S1-Broken Sink	Girls Locker Room Sink, not in use	57.1
12/8/2016	2-LHS-111 Prep Room S2	Room 111 Prep Room, right sink	39

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.

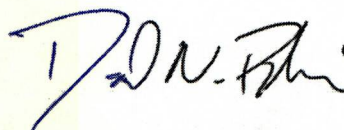
The NYSDOH recommends reviewing "3Ts for Reducing Lead in Drinking Water in Schools, Revised Technical Guidance" published by the United States Environmental Protection Agency (USEPA) to assist schools in assessing an appropriate remediation plan. A copy of this publication can be reviewed through the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



December 13, 2016

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

Work Order No.: 16K0775

Re: LHS

Dear Kelly Reidy:

Microbac Laboratories, Inc. - Chicagoland Division received 8 sample(s) on 11/9/2016 9:35:00AM for the analyses presented in the following report as Work Order 16K0775.

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

Microbac Laboratories, Inc.

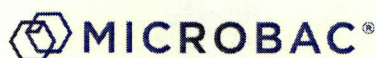
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**WORK ORDER SAMPLE SUMMARY****Date:** Tuesday, December 13, 2016**Client:** The Lotis Engineering Group, P.C.**Project:** LHS**Lab Order:** 16K0775

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
16K0775-01	2-LHS-Kitchen-Dishwasher		11/04/2016 05:45	11/9/2016 9:35:00AM
16K0775-02	9-LHS-Kitchen-Kitchen-SSF-1-L	SSF=Steam Filler 1	11/04/2016 05:47	11/9/2016 9:35:00AM
16K0775-03	10-LHS-Kitchen-SSFH-2-Right	SSFH=Steam Filler Ho	11/04/2016 05:48	11/9/2016 9:35:00AM
16K0775-04	11-LHS-Kitchen-Steamer		11/04/2016 05:50	11/9/2016 9:35:00AM
16K0775-05	12-LHS-Kitchen-Tilt Skillet		11/04/2016 05:50	11/9/2016 9:35:00AM
16K0775-06	13-LHS-GLR-S1-Broken Sink		11/04/2016 05:51	11/9/2016 9:35:00AM
16K0775-07	14-LHS-BPLR-WF1	BPLR=Boy's Pool Lock	11/04/2016 05:52	11/9/2016 9:35:00AM
16K0775-08	5-LHS-Kitchen-Dish-Sprayer		11/04/2016 05:45	11/9/2016 9:35:00AM

Microbac Laboratories, Inc.

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Analytical Results

Date: Tuesday, December 13, 2016

Client: The Lotis Engineering Group, P.C.
Client Project: LHS

Work Order: 16K0775
Received: 11/09/2016 9:35

Analyses	Certs	Result	Units	Qual	Analyzed	Tech	Method
01 2-LHS-Kitchen-Dishwasher							Collected: 11/04/2016 05:45
Lead	gdmnoi	1.53	ug/L		11/22/2016 14:41	RPL	EPA 200.8 Rev 5.4
02 9-LHS-Kitchen-Kitchen-SSF-1-Left - SSF=Steam Filler 1							Collected: 11/04/2016 05:47
Lead	gdmnoi	5.69	ug/L		11/22/2016 14:42	RPL	EPA 200.8 Rev 5.4
03 10-LHS-Kitchen-SSFH-2-Right - SSFH=Steam Filler Hose 1							Collected: 11/04/2016 05:48
Lead	gdmnoi	3.02	ug/L		11/22/2016 14:42	RPL	EPA 200.8 Rev 5.4
04 11-LHS-Kitchen-Steamer							Collected: 11/04/2016 05:50
Lead	gdmnoi	1.72	ug/L		11/22/2016 14:43	RPL	EPA 200.8 Rev 5.4
05 12-LHS-Kitchen-Tilt Skillet							Collected: 11/04/2016 05:50
Lead	gdmnoi	8.99	ug/L		11/22/2016 14:44	RPL	EPA 200.8 Rev 5.4
06 13-LHS-GLR-S1-Broken Sink							Collected: 11/04/2016 05:51
Lead	gdmnoi	57.1	ug/L		11/22/2016 14:46	RPL	EPA 200.8 Rev 5.4
07 14-LHS-BPLR-WF1 - BPLR=Boy's Pool Locker Room							Collected: 11/04/2016 05:52
Lead	gdmnoi	7.00	ug/L		11/22/2016 14:48	RPL	EPA 200.8 Rev 5.4
08 5-LHS-Kitchen-Dish-Sprayer							Collected: 11/04/2016 05:45
Lead	gdmnoi	1.19	ug/L		12/12/2016 15:00	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	ICSA = Interference Check Standard "A"
DUP = Method Duplicate	ICSAB = Interference Check Standard "AB"
BS = Method Blank Spike	BSD = Method Blank Spike Duplicate
MS = Matrix Spike	MSD = Matrix Spike Duplicate
ICB = Initial Calibration Blank	ICV = Initial Calibration Verification
CCB = Continuing Calibration Blank	CCV = Continuing Calibration Verification
CRL = Client Required Reporting Limit	OPR = Ongoing Precision and Recovery Standard
PDS = Post Digestion Spike	SD = Serial Dilution
QCS = Quality Control Standard	

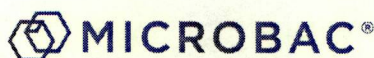
CERTIFICATIONS (Certs)

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 Protection (#68-04863)
- ^o Virginia Department of General Services Division of Consolidated Laboratory Services (#7990)

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COOLER INSPECTION

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

Work Order Number: 16K0775

Checklist completed by: 11/10/2016 3:30:00PM | Nicole Rainwater

Carrier Name: UPS

Date: Tuesday, December 13, 2016

Date/Time Received: 11/09/2016 09:35

Received by: Nicole Rainwater

Reviewed by: 11/15/2016 | KAZ

Cooler ID: Default Cooler

Container/Temp Blank Temperature: 21.0° 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
16K0775-01	2-LHS-Kitchen-Dishwasher	
16K0775-02	9-LHS-Kitchen-Kitchen-SSF-1-Left	
16K0775-03	10-LHS-Kitchen-SSFH-2-Right	
16K0775-04	11-LHS-Kitchen-Steamer	
16K0775-05	12-LHS-Kitchen-Tilt Skillet	
16K0775-06	13-LHS-GLR-S1-Broken Sink	
16K0775-07	14-LHS-BPLR-WF1	
16K0775-08	5-LHS-Kitchen-Dish-Sprayer	

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16K0775

SampleID	Matrix	SampleName	SampleAlias	Sampled	SampledBy
1B	Aqueous	HOLD DO NOT SAMPLE YET			
2B	Aqueous	HOLD DO NOT SAMPLE YET			
3B	Aqueous	HOLD DO NOT SAMPLE YET			
4B	Aqueous	HOLD DO NOT SAMPLE YET			
5B	Aqueous	HOLD DO NOT SAMPLE YET			
6B	Aqueous	HOLD DO NOT SAMPLE YET			
7B	Aqueous	HOLD DO NOT SAMPLE YET			
8B	Aqueous	HOLD DO NOT SAMPLE YET			
9B	Aqueous	HOLD DO NOT SAMPLE YET			
10B	Aqueous	HOLD DO NOT SAMPLE YET			
11B	Aqueous	HOLD DO NOT SAMPLE YET			
12B	Aqueous	HOLD DO NOT SAMPLE YET			
13B	Aqueous	HOLD DO NOT SAMPLE YET			
14B	Aqueous	HOLD DO NOT SAMPLE YET			

X Matt Green 11/7/16

Released to UPS

Rec Lab: Nival Ranwate

NI 215
- 0.5
210°C

UPS

11/9/16 @ 0925





December 16, 2016

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

Work Order No.: 16L0699

Re: LHS

Dear Kelly Reidy:

Microbac Laboratories, Inc. - Chicagoland Division received 3 sample(s) on 12/13/2016 1:35:00PM for the analyses presented in the following report as Work Order 16L0699.

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.

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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.

A handwritten signature in black ink, appearing to read "Karen Ziolkowski", with a long horizontal line extending to the right.

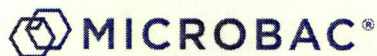
Karen Ziolkowski
Senior Project Manager

**WORK ORDER SAMPLE SUMMARY****Date:** *Friday, December 16, 2016***Client:** The Lotis Engineering Group, P.C.**Project:** LHS**Lab Order:** 16L0699

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
16L0699-01	1-LHS-NO-Ice Machine	Ice MACHine	12/08/2016 07:07	12/13/2016 1:35:00PM
16L0699-02	2-LHS-111 Prep Room S1	left Sink in prep room	12/08/2016 07:16	12/13/2016 1:35:00PM
16L0699-03	2-LHS-111 Prep Room S2	Right Sink in prep room	12/08/2016 07:30	12/13/2016 1:35:00PM

Microbac Laboratories, Inc.

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Analytical Results

Date: Friday, December 16, 2016

Client: The Lotis Engineering Group, P.C.
Client Project: LHS

Work Order: 16L0699
Received: 12/13/2016 13:35

Analyses	Certs	Result	Units	Qual	Analyzed	Tech	Method
01 1-LHS-NO-Ice Machine - Ice Machine							Collected: 12/08/2016 07:07
Lead	gdmnoi	3.53	ug/L		12/15/2016 17:49	RPL	EPA 200.8 Rev 5.4
02 2-LHS-111 Prep Room S1 - left Sink in prep room							Collected: 12/08/2016 07:16
Lead	gdmnoi	7.67	ug/L		12/15/2016 17:55	RPL	EPA 200.8 Rev 5.4
03 2-LHS-111 Prep Room S2 - Right Sink in prep room							Collected: 12/08/2016 07:30
Lead	gdmnoi	39.0	ug/L		12/15/2016 17:56	RPL	EPA 200.8 Rev 5.4

Microbac Laboratories, Inc.

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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)
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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

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ICB = Initial Calibration Blank	ICV = Initial Calibration Verification
CCB = Continuing Calibration Blank	CCV = Continuing Calibration Verification
CRL = Client Required Reporting Limit	OPR = Ongoing Precision and Recovery Standard
PDS = Post Digestion Spike	SD = Serial Dilution
QCS = Quality Control Standard	

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- ^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 Protection (#68-04863)
- ^o Virginia Department of General Services Division of Consolidated Laboratory Services (#7990)

Microbac Laboratories, Inc.

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COOLER INSPECTION

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

Work Order Number: 16L0699

Checklist completed by: 12/13/2016 10:08:00AM Nicole Rainwater

Carrier Name: UPS

Date: Friday, December 16, 2016

Date/Time Received: 12/13/2016 13:35

Received by: Samantha Paulus

Reviewed by: 12/13/2016 KAZ

Cooler ID: Default Cooler

Container/Temp Blank Temperature: 19.2° C

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

If No, adjusted by? _____

COC included the requested analyses?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC signed when relinquished and received?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples received on ice?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Samples properly preserved?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Voa vials for aqueous samples have zero headspace?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>

Cooler Comments:

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

Sample ID	Client Sample ID	Comments
16L0699-01	1-LHS-NO-Ice Machine	
16L0699-02	2-LHS-111 Prep Room S1	
16L0699-03	2-LHS-111 Prep Room S2	

16L0699

SampleID	Matrix	SampleName	SampleAlias	Sampled	SampledBy
1	Aqueous	1-LHS-NO-Ice Machine	Ice Machine	12/8/2016 07:07	Matt
2	Aqueous				
3	Aqueous				

-01
06
-03

X Matthew Green

Matthew Green

12/8/2016

Relinquished to VPS

Rec'd Lab:

Jonathan Pank

12-16 @ 1335

NI $\frac{192}{-00}$
192°C





December 21, 2016

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

Work Order No.: 16L0984

Re: LHS-215-S1

Dear Kelly Reidy:

Microbac Laboratories, Inc. - Chicagoland Division received 1 sample(s) on 12/15/2016 2:30:00PM for the analyses presented in the following report as Work Order 16L0984.

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.

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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.

A handwritten signature in black ink, appearing to read "Ron Misiunas", written over a light-colored rectangular background.

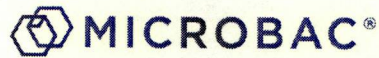
Ron Misiunas
Director of Laboratory Services

**WORK ORDER SAMPLE SUMMARY****Date:** *Wednesday, December 21, 2016***Client:** The Lotis Engineering Group, P.C.**Project:** LHS-215-S1**Lab Order:** 16L0984

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
16L0984-01	1-LHS-215-S1		12/12/2016 06:50	12/15/2016 2:30:00PM

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Analytical Results

Date: Wednesday, December 21, 2016

Client: The Lotis Engineering Group, P.C.
Client Project: LHS-215-S1

Work Order: 16L0984
Received: 12/15/2016 14:30

Analyses	Certs	Result	Units	Qual	Analyzed	Tech	Method
01 1-LHS-215-S1							Collected: 12/12/2016 06:50
Lead	gdmnoi	9.57	ug/L		12/21/2016 13:38	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	ICSA = Interference Check Standard "A"
DUP = Method Duplicate	ICSAB = Interference Check Standard "AB"
BS = Method Blank Spike	BSD = Method Blank Spike Duplicate
MS = Matrix Spike	MSD = Matrix Spike Duplicate
ICB = Initial Calibration Blank	ICV = Initial Calibration Verification
CCB = Continuing Calibration Blank	CCV = Continuing Calibration Verification
CRL = Client Required Reporting Limit	OPR = Ongoing Precision and Recovery Standard
PDS = Post Digestion Spike	SD = Serial Dilution
QCS = Quality Control Standard	

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 Protection (#68-04863)
- ^o Virginia Department of General Services Division of Consolidated Laboratory Services (#7990)



COOLER INSPECTION

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

Date: Wednesday, December 21, 2016

Date/Time Received: 12/15/2016 14:30

Work Order Number: 16L0984

Received by: Nicole Rainwater

Checklist completed by: 12/16/2016 8:50:00AM Nicole Rainwater

Reviewed by: 12/16/2016 KAZ

Carrier Name: Priority US Mail

Cooler ID: Default Cooler

Container/Temp Blank Temperature: 18.2° C

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

If No, adjusted by? _____

COC included the requested analyses?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
COC signed when relinquished and received?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Samples received on ice?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Samples properly preserved?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Voa vials for aqueous samples have zero headspace?	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>

Cooler Comments:

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

Sample ID	Client Sample ID	Comments
16L0984-01	1-LHS-215-S1	

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16L0984

SampleID	Matrix	SampleName	SampleAlias	Sampled	SampledBy
1B	Aqueous				-01

NI $\frac{18.2}{0.0}$
18.2°C

Rec'd Lab: Nich Rainwater 12-15-16 @ 1430

16L0984 Karen Ziolkowski
The Loftis Engineering Group, P.C. - East Amherst N
LHS-215-S1
12/15/2016



