



December 27, 2016

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

Work Order No.: 16L1160

Re: CPE

Dear Kelly Reidy:

Microbac Laboratories, Inc. - Chicagoland Division received 17 sample(s) on 12/19/2016 10:55:00AM for the analyses presented in the following report as Work Order 16L1160.

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.

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

[Microbac Laboratories, Inc.](#)

250 West 84th Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | www.microbac.com

**WORK ORDER SAMPLE SUMMARY****Date:** Tuesday, December 27, 2016**Client:** The Lotis Engineering Group, P.C.**Project:** CPE**Lab Order:** 16L1160

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
16L1160-01	1-CPE-201-Bathroom Sink		12/15/2016 06:34	12/19/2016 10:55:00AM
16L1160-02	2-CPE-114-s		12/15/2016 07:09	12/19/2016 10:55:00AM
16L1160-03	3-CPE-214-S		12/15/2016 07:00	12/19/2016 10:55:00AM
16L1160-04	4-CPE-215-S		12/15/2016 06:58	12/19/2016 10:55:00AM
16L1160-05	5-CPE-216-S1	Classroom	12/15/2016 06:55	12/19/2016 10:55:00AM
16L1160-06	6-CPE-216-S2	Bathroom	12/15/2016 06:55	12/19/2016 10:55:00AM
16L1160-07	7-CPE-223-S		12/15/2016 06:50	12/19/2016 10:55:00AM
16L1160-08	8-CPE-224-S1		12/15/2016 06:47	12/19/2016 10:55:00AM
16L1160-09	9-CPE-225-S1		12/15/2016 07:14	12/19/2016 10:55:00AM
16L1160-10	10-CPE-226-S1		12/15/2016 06:45	12/19/2016 10:55:00AM
16L1160-11	11-CPE-227-S		12/15/2016 06:43	12/19/2016 10:55:00AM
16L1160-12	12-CPE-212-S	Faculty Room	12/15/2016 06:45	12/19/2016 10:55:00AM
16L1160-13	13-CPE-Girls Bathroom Sink	Across from 222	12/15/2016 06:46	12/19/2016 10:55:00AM
16L1160-14	14-CPE-109-Bubbler		12/15/2016 07:11	12/19/2016 10:55:00AM
16L1160-15	15-CPE-Kitchen Sprayer		12/15/2016 07:15	12/19/2016 10:55:00AM
16L1160-16	16-CPE-106-Nurses Bathroom-S		12/15/2016 07:18	12/19/2016 10:55:00AM
16L1160-17	17-CPE-106 Nurses Office-Snk		12/15/2016 07:18	12/19/2016 10:55:00AM

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Analytical Results

Date: Tuesday, December 27, 2016

Client: The Lotus Engineering Group, P.C.
Client Project: CPE

Work Order: 16L1160
Received: 12/19/2016 10:55

Analyses	Certs	Result	Units	Qual	Analyzed	Tech	Method
01 1-CPE-201-Bathroom Sink							Collected: 12/15/2016 06:34
Lead	gdmnoi	19.5	ug/L		12/21/2016 16:27	RPL	EPA 200.8 Rev 5.4
02 2-CPE-114-s							Collected: 12/15/2016 07:09
Lead	gdmnoi	23.3	ug/L		12/21/2016 16:28	RPL	EPA 200.8 Rev 5.4
03 3-CPE-214-S							Collected: 12/15/2016 07:00
Lead	dginno	93.2	ug/L		12/23/2016 15:45	RPL	EPA 200.8 Rev 5.4
04 4-CPE-215-S							Collected: 12/15/2016 06:58
Lead	gdmnoi	28.8	ug/L		12/21/2016 16:29	RPL	EPA 200.8 Rev 5.4
05 5-CPE-216-S1 - Classroom							Collected: 12/15/2016 06:55
Lead	gdmnoi	38.5	ug/L		12/21/2016 16:30	RPL	EPA 200.8 Rev 5.4
06 6-CPE-216-S2 - Bathroom							Collected: 12/15/2016 06:55
Lead	gdmnoi	17.9	ug/L		12/21/2016 16:34	RPL	EPA 200.8 Rev 5.4
07 7-CPE-223-S							Collected: 12/15/2016 06:50
Lead	gdmnoi	14.1	ug/L		12/21/2016 16:35	RPL	EPA 200.8 Rev 5.4
08 8-CPE-224-S1							Collected: 12/15/2016 06:47
Lead	gdmnoi	36.6	ug/L		12/21/2016 16:36	RPL	EPA 200.8 Rev 5.4
09 9-CPE-225-S1							Collected: 12/15/2016 07:14
Lead	gdmnoi	24.9	ug/L		12/21/2016 16:39	RPL	EPA 200.8 Rev 5.4
10 10-CPE-226-S1							Collected: 12/15/2016 06:45
Lead	gdmnoi	30.4	ug/L		12/21/2016 16:40	RPL	EPA 200.8 Rev 5.4

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Analytical Results

Date: Tuesday, December 27, 2016

11 11-CPE-227-S Collected: 12/15/2016 06:43

Lead gdmnoi **34.4** ug/L 12/21/2016 16:41 RPL EPA 200.8 Rev 5.4

12 12-CPE-212-S - Faculty Room Collected: 12/15/2016 06:45

Lead gdmnoi **12.7** ug/L 12/21/2016 16:42 RPL EPA 200.8 Rev 5.4

13 13-CPE-Girls Bathroom Sink - Across from 222 Collected: 12/15/2016 06:46

Lead gdmnoi **33.0** ug/L 12/21/2016 16:43 RPL EPA 200.8 Rev 5.4

14 14-CPE-109-Bubbler Collected: 12/15/2016 07:11

Lead gdmnoi **20.0** ug/L 12/21/2016 16:45 RPL EPA 200.8 Rev 5.4

15 15-CPE-Kitchen Sprayer Collected: 12/15/2016 07:15

Lead gdmnoi **269** ug/L E 12/21/2016 16:46 RPL EPA 200.8 Rev 5.4

16 16-CPE-106-Nurses Bathroom-S Collected: 12/15/2016 07:18

Lead gdmnoi **15.6** ug/L 12/21/2016 16:49 RPL EPA 200.8 Rev 5.4

17 17-CPE-106 Nurses Office-Snk Collected: 12/15/2016 07:18

Lead gdmnoi **11.1** ug/L 12/22/2016 12:40 SJE EPA 200.8 Rev 5.4

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.

Work Order Number: 16L1160

Checklist completed by: 12/20/2016 2:56:00PM Dave Bryant

Carrier Name: UPS

Date: Tuesday, December 27, 2016

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

Received by: Nicole Rainwater

Reviewed by: 12/27/2016 KAZ

Cooler ID: Default Cooler

Container/Temp Blank Temperature: -0.8° 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 type="checkbox"/>	No	<input checked="" 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"/>

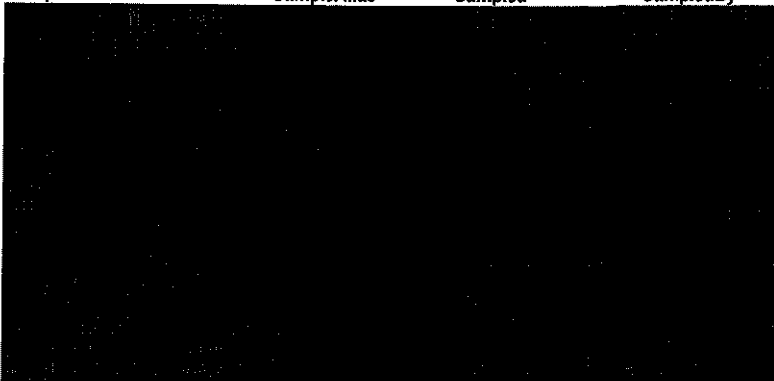
Cooler Comments:

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

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Sample ID	Client Sample ID	Comments
16L1160-01	1-CPE-201-Bathroom Sink	
16L1160-02	2-CPE-114-s	
16L1160-03	3-CPE-214-S	
16L1160-04	4-CPE-215-S	
16L1160-05	5-CPE-216-S1	
16L1160-06	6-CPE-216-S2	
16L1160-07	7-CPE-223-S	
16L1160-08	8-CPE-224-S1	
16L1160-09	9-CPE-225-S1	
16L1160-10	10-CPE-226-S1	
16L1160-11	11-CPE-227-S	
16L1160-12	12-CPE-212-S	
16L1160-13	13-CPE-Girls Bathroom Sink	
16L1160-14	14-CPE-109-Bubbler	
16L1160-15	15-CPE-Kitchen Sprayer	
16L1160-16	16-CPE-106-Nurses Bathroom-S	
16L1160-17	17-CPE-106 Nurses Office-Snk	

SampleID	Matrix	SampleName	SampleAlias	Sampled	SampledBy
1	Aqueous				-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
11	Aqueous				-11
12	Aqueous				-12
13	Aqueous				-13
14	Aqueous				-14
15	Aqueous				-15
16	Aqueous				-16
17	Aqueous				-17

16L1160

UPS

Rec @ Lab: Nicola Reinwater 12-19-16 @ 1055

-08
-0-0

-0-8°C NI

