

July 18, 2016

Carolyn Green
Dunlap Lake Property Owners Association
P.O. Box 5
Edwardsville, IL 62025
TEL: (618) 791-1398
FAX:



RE: Lake Water

WorkOrder: 16070607

Dear Carolyn Green:

TEKLAB, INC received 3 samples on 7/11/2016 2:16:00 PM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,



Marvin L. Darling
Project Manager
(618)344-1004 ex 41
mdarling@teklabinc.com



Report Contents

<http://www.teklabinc.com/>

Client: Dunlap Lake Property Owners Association

Work Order: 16070607

Client Project: Lake Water

Report Date: 18-Jul-16

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	4
Laboratory Results	5
Receiving Check List	8
Chain of Custody	Appended

Client: Dunlap Lake Property Owners Association

Work Order: 16070607

Client Project: Lake Water

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Abbr Definition

- CCV Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
- DF Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
- DNI Did not ignite
- DUP Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot.
- ICV Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
- IDPH IL Dept. of Public Health
- LCS Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. The acceptable recovery range is in the QC Package (provided upon request).
- LCSD Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MBLK Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
- MDL Method detection limit means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.
- MS Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
- MSD Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
- MW Molecular weight
- ND Not Detected at the Reporting Limit
- NELAP NELAP Accredited
- PQL Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in the QC Package (provided upon request).
- RL The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
- RPD Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
- SPK The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
- Surr Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
- TIC Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
- TNTC Too numerous to count (> 200 CFU)

Qualifiers

- | | |
|--|--|
| # - Unknown hydrocarbon | B - Analyte detected in associated Method Blank |
| E - Value above quantitation range | H - Holding times exceeded |
| I - Associated internal standard was outside method criteria | M - Manual Integration used to determine area response |
| ND - Not Detected at the Reporting Limit | R - RPD outside accepted recovery limits |
| S - Spike Recovery outside recovery limits | T - TIC(Tentatively identified compound) |
| X - Value exceeds Maximum Contaminant Level | |



Case Narrative

<http://www.teklabinc.com/>

Client: Dunlap Lake Property Owners Association

Work Order: 16070607

Client Project: Lake Water

Report Date: 18-Jul-16

Cooler Receipt Temp: 22.22 °C

Locations and Accreditations

	<u>Collinsville</u>	<u>Springfield</u>	<u>Kansas City</u>	<u>Collinsville Air</u>
Address	5445 Horseshoe Lake Road Collinsville, IL 62234-7425	3920 Pintail Dr Springfield, IL 62711-9415	8421 Nieman Road Lenexa, KS 66214	5445 Horseshoe Lake Road Collinsville, IL 62234-7425
Phone	(618) 344-1004	(217) 698-1004	(913) 541-1998	(618) 344-1004
Fax	(618) 344-1005	(217) 698-1005	(913) 541-1998	(618) 344-1005
Email	jhriley@teklabinc.com	KKlostermann@teklabinc.com	dthompson@teklabinc.com	EHurley@teklabinc.com

<u>State</u>	<u>Dept</u>	<u>Cert #</u>	<u>NELAP</u>	<u>Exp Date</u>	<u>Lab</u>
Illinois	IEPA	100226	NELAP	1/31/2017	Collinsville
Kansas	KDHE	E-10374	NELAP	7/31/2016	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2017	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2017	Collinsville
Texas	TCEQ	T104704515-12-1	NELAP	7/31/2016	Collinsville
Arkansas	ADEQ	88-0966		3/14/2017	Collinsville
Illinois	IDPH	17584		5/31/2017	Collinsville
Kentucky	KDEP	98006		12/31/2016	Collinsville
Kentucky	UST	0073		1/31/2017	Collinsville
Missouri	MDNR	00930		5/31/2017	Collinsville
Missouri	MDNR	930		1/31/2017	Collinsville
Oklahoma	ODEQ	9978		8/31/2016	Collinsville



Laboratory Results

<http://www.teklabinc.com/>

Client: Dunlap Lake Property Owners Association

Work Order: 16070607

Client Project: Lake Water

Report Date: 18-Jul-16

Lab ID: 16070607-001

Client Sample ID: Area 1

Matrix: AQUEOUS

Collection Date: 07/11/2016 12:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 18TH ED. 9222 D MEMBRANE FILTER								
Fecal Coliform		20		< 20	CFU/100ml	20	07/11/2016 15:22	R221008
STANDARD METHODS 18TH ED. 9222D, 9221F EC-MUG								
E Coli		0		Absent	P/A	1	07/11/2016 15:22	R221008
EPA 600 351.2								
Total Kjeldahl Nitrogen (as N)	NELAP	0.50		1.1	mg/L	1	07/13/2016 11:10	120637
EPA 600 351.2 R2.0, 353.2 R2.0								
Nitrogen, Total		0.05		1.23	mg/L	1	07/13/2016 0:00	R221077
EPA 600 353.2 R2.0 (TOTAL)								
Nitrogen, Nitrate (as N)	NELAP	0.050		0.126	mg/L	1	07/12/2016 13:37	R221039
EPA 600 365.4 (TOTAL)								
Phosphorus, Total (as P)	NELAP	0.050		0.088	mg/L	1	07/13/2016 11:08	120635
STANDARD METHODS 4500-NO2 B (TOTAL)								
Nitrogen, Nitrite (as N)	NELAP	0.05		< 0.05	mg/L	1	07/12/2016 16:42	R221044
EPA 600 245.1 R3.0 (TOTAL)								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	07/12/2016 10:24	120595
EPA 600 4.1.4, 200.7R4.4, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/12/2016 16:20	120581
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/12/2016 16:20	120581
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/12/2016 16:20	120581



Laboratory Results

<http://www.teklabinc.com/>

Client: Dunlap Lake Property Owners Association

Work Order: 16070607

Client Project: Lake Water

Report Date: 18-Jul-16

Lab ID: 16070607-002

Client Sample ID: Area 2

Matrix: AQUEOUS

Collection Date: 07/11/2016 12:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 18TH ED. 9222 D MEMBRANE FILTER								
Fecal Coliform		20		40	CFU/100ml	20	07/11/2016 15:24	R221008
STANDARD METHODS 18TH ED. 9222D, 9221F EC-MUG								
E Coli		0		Absent	P/A	1	07/11/2016 15:24	R221008
EPA 600 351.2								
Total Kjeldahl Nitrogen (as N)	NELAP	0.50		0.90	mg/L	1	07/13/2016 11:21	120637
EPA 600 351.2 R2.0, 353.2 R2.0								
Nitrogen, Total		0.05		0.92	mg/L	1	07/13/2016 0:00	R221077
EPA 600 353.2 R2.0 (TOTAL)								
Nitrogen, Nitrate (as N)	NELAP	0.050		< 0.050	mg/L	1	07/12/2016 14:06	R221039
EPA 600 365.4 (TOTAL)								
Phosphorus, Total (as P)	NELAP	0.050		0.139	mg/L	1	07/13/2016 11:18	120635
STANDARD METHODS 4500-NO2 B (TOTAL)								
Nitrogen, Nitrite (as N)	NELAP	0.05		< 0.05	mg/L	1	07/12/2016 16:43	R221044
EPA 600 245.1 R3.0 (TOTAL)								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	07/12/2016 10:26	120595
EPA 600 4.1.4, 200.7R4.4, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/12/2016 16:24	120581
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/12/2016 16:24	120581
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/12/2016 16:24	120581



Laboratory Results

<http://www.teklabinc.com/>

Client: Dunlap Lake Property Owners Association

Work Order: 16070607

Client Project: Lake Water

Report Date: 18-Jul-16

Lab ID: 16070607-003

Client Sample ID: Area 3

Matrix: AQUEOUS

Collection Date: 07/11/2016 12:40

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
STANDARD METHODS 18TH ED. 9222 D MEMBRANE FILTER								
Fecal Coliform		20		20	CFU/100ml	20	07/11/2016 15:28	R221008
STANDARD METHODS 18TH ED. 9222D, 9221F EC-MUG								
E Coli		0		Absent	P/A	1	07/11/2016 15:28	R221008
EPA 600 351.2								
Total Kjeldahl Nitrogen (as N)	NELAP	0.50		0.91	mg/L	1	07/13/2016 11:23	120637
EPA 600 351.2 R2.0, 353.2 R2.0								
Nitrogen, Total		0.05		0.93	mg/L	1	07/13/2016 0:00	R221077
EPA 600 353.2 R2.0 (TOTAL)								
Nitrogen, Nitrate (as N)	NELAP	0.050		< 0.050	mg/L	1	07/12/2016 14:08	R221039
EPA 600 365.4 (TOTAL)								
Phosphorus, Total (as P)	NELAP	0.050		0.119	mg/L	1	07/13/2016 11:21	120635
STANDARD METHODS 4500-NO2 B (TOTAL)								
Nitrogen, Nitrite (as N)	NELAP	0.05		< 0.05	mg/L	1	07/12/2016 16:43	R221044
EPA 600 245.1 R3.0 (TOTAL)								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	07/12/2016 10:33	120595
EPA 600 4.1.4, 200.7R4.4, METALS BY ICP (TOTAL)								
Arsenic	NELAP	0.0250		< 0.0250	mg/L	1	07/12/2016 16:28	120581
Copper	NELAP	0.0050		< 0.0050	mg/L	1	07/12/2016 16:28	120581
Lead	NELAP	0.0150		< 0.0150	mg/L	1	07/12/2016 16:28	120581



Receiving Check List

<http://www.teklabinc.com/>

Client: Dunlap Lake Property Owners Association

Work Order: 16070607

Client Project: Lake Water

Report Date: 18-Jul-16

Carrier: Carolyn Green

Received By: EAH

Completed by: *Kalyn Foecke*

Reviewed by: *Marvin L. Darling II*

On: 11-Jul-16
Kalyn Foecke

On: 11-Jul-16
Marvin L. Darling

Pages to follow: Chain of custody Extra pages included

- Shipping container/cooler in good condition? Yes No Not Present Temp °C **22.22**
- Type of thermal preservation? None Ice Blue Ice Dry Ice
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? 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
- Reported field parameters measured: Field Lab NA
- Container/Temp Blank temperature in compliance? Yes No

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

- Water – at least one vial per sample has zero headspace? Yes No No VOA vials
- Water - TOX containers have zero headspace? Yes No No TOX containers
- Water - pH acceptable upon receipt? Yes No NA
- NPDES/CWA TCN interferences checked/treated in the field? Yes No NA

Any No responses must be detailed below or on the COC.

Dates per sample containers. KF 7/11/16

Fecal container labeled as collected at 12:34 while COC has a time of 12:30. Carolyn Green was notified via workorder summary. KF 7/11/16

Client: Dunlap Lake Property Owners Association
 Address: P.O. Box 5
Edwardsville, IL 62025
 City / State / Zip
 Contact: Carolyn Green Phone: (618) 791-1398
carolyn@dunlaplake.org Fax:
 E-Mail:

Samples on: ICE BLUE ICE NO ICE 22.22 °C
 Preserved in: LAB FIELD **FOR LAB USE ONLY**
 Lab Notes: 2 Tanks per sample containers K771116
 Client Comments: 1 Bay Dam
2 Marks Cove
3 Saturated - W-3

Are these samples known to be involved in litigation? If yes, a surcharge will apply Yes No
 Are these samples known to be hazardous? Yes No
 Are there any required reporting limits to be met on the requested analysis? If yes, please provide limits in the comment section. Yes No

Project Name/Number	Sample Collector's Name	Billing Instructions		Date/Time Sampled	
		Results Requested	# and Type of Containers	Standard	Other
Lake Water	<u>Mark Tanks & Carriage Green</u>	<input type="checkbox"/> Standard <input type="checkbox"/> 1-2 Day (100% Surcharge) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day (60% Surcharge)	OTHER NaHSO4 MeOH HCL H2SO4 NaOH HNO3 UNPRES	<input type="checkbox"/>	<input type="checkbox"/>
<u>16070607</u>	<u>Area 1</u>			<u>12:30</u>	<u>7/11/16</u>
<u>001</u>	<u>2</u>			<u>12:45</u>	<u>7/11/16</u>
<u>002</u>	<u>3</u>			<u>13:40</u>	<u>7/11/16</u>
<u>003</u>					

MATRIX	INDICATE ANALYSIS REQUESTED										
Aqueous	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drinking Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sludge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Special Waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Groundwater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
As Cu Pb	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fecal Coliform/eColi	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitrate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nitrite	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Phosphorus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TKN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total Nitrogen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Relinquished By: Carolyn Green Date/Time: 7-11-16 18:16
 Received By: [Signature] Date/Time: 7/11/16 14:16