



September 12, 2016

Client: Guthrie PWA (OK1020903)

PO Box 908

Guthrie, OK 73044

Requested By: -



National Environmental Laboratory Accreditation Program
Kansas CERT # E-10219

Sample Project Name: Water Analysis

Date Samples Received: September 07, 2016 Time: 11:55 sample temp upon arrival at lab = 12°C - On Ice

Matrix: Drinking Water Raw

Lab Log Numbers: **6I07065-01** **6I07065-02** **6I07065-03** **6I07065-04**

Work Order: 6I07065

Report # 6I07065-0912161435

EPA Lab ID#'s: **Stillwater OK00092 Tulsa OK00983 OKC OK00129 ICR OK 001**

Oklahoma Certification: Stillwater WasteWater, DEQ 8316/ Drinking Water, DEQ D9602
Tulsa WasteWater, DEQ 9905 / Drinking Water, DEQ D9901
Oklahoma City WasteWater DEQ 7202 / Drinking Water, DEQ D9937

Kansas Certification: Stillwater NELAP CERT # E-10219

New Jersey Certification: Oklahoma City Drinking Water NELAP CERT # OK005

Texas Certification: Stillwater Drinking Water NELAP CERT # T105704533-14-1

Method Reference: 40 CFR 136, 141, and 261 Methods for Chemical Analysis of Water and Wastes EPA-600/4-79-020, March 1983. Test Methods for Evaluating Solid Wastes, SW-846, Final Update III. Standard Methods 1998 (20th Edition), Standard Methods 2005 (21st Edition) and Standard Methods 2011 (22nd Edition) for the Examination of Water and Wastewater.

Analysis Reference: If qualifiers present in "Prep Info" or "Analysis Info", then analysis performed as follows: @= Tulsa Lab and * = OKC Lab. If no qualifiers present, then analysis performed at Stillwater Lab.

Accurate Environmental Laboratories certify that the test results performed at the Stillwater lab meet all requirements of NELAP. Any exceptions to this can be found in the report footer or Quality Control Section of the report.

This report is to only be replicated in its entirety.

Accurate Environmental sampling protocol was followed for any sampling performed by Accurate Field Services.

Sample: Liberty Lake

Location Code:

PWSID#:

Collection Type: Grab

Sample Time: 9/7/16 10:54

Lab Log# 6107065-01

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Geosmin & MIB by SM6040 D	Geosmin	15.93 ng/L		2.000	09/08/16 08:14 MMV	09/08/16 12:59 MMV
Geosmin & MIB by SM6040 D	MIB	3.600 ng/L		2.000	09/08/16 08:14 MMV	09/08/16 12:59 MMV

Sample: Liberty Lake

Location Code:

PWSID#:

Collection Type: Grab

Sample Time: 9/7/16 10:54

Lab Log# 6107065-02

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Algae SM10900B (No Cert. Avail.)	Cyanobacteria, Blue-Green Algae	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Chlorophyta, Green Algae	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Charophyta, Green Algae	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Rhodophyta, Red Algae	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Euglenophyta, Euglenoids	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Bacillariophyta, Diatoms	Present P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Phaeophyta, Brown Algae	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Chrysophyta, Golden-Brown Algae	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Xanthophyta, Yellow-Green Algae	Present P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Cryptophyta, Cryptomonads	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Dinoflagellata, Dinoflagellates	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Ciliophora, Ciliates	Present P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Flagellates	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Microcystin-LR by LCMSMS (Non-certified)	Microcystin-LR	BPQL ug/L		0.200	09/08/16 11:05 MMV	09/08/16 17:28 MMV

Sample: Water Plant

Location Code:

PWSID#:

Collection Type: Grab

Sample Time: 9/7/16 10:51

Lab Log# 6107065-03

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Geosmin & MIB by SM6040 D	Geosmin	26.55 ng/L		2.000	09/08/16 08:14 MMV	09/08/16 13:25 MMV
Geosmin & MIB by SM6040 D	MIB	19.40 ng/L		2.000	09/08/16 08:14 MMV	09/08/16 13:25 MMV

Sample: Water Plant

Location Code:

PWSID#:

Collection Type: Grab

Sample Time: 9/7/16 10:51

Lab Log# 6107065-04

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Algae SM10900B (No Cert. Avail.)	Cyanobacteria, Blue-Green Algae	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Chlorophyta, Green Algae	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Charophyta, Green Algae	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Rhodophyta, Red Algae	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Euglenophyta, Euglenoids	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Bacillariophyta, Diatoms	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Phaeophyta, Brown Algae	Absent P/A			09/07/16 14:30 RND	09/07/16 17:00 RND

Sample:

Location Code:

PWSID#:

Collection Type: Grab

Sample Time: 9/7/16 10:51

Lab Log# 6107065-04

Method/Parameter	Test	Result	Notes	PQL#	Prep Info	Analysis Info
Algae SM10900B (No Cert. Avail.)	Chrysophyta, Golden-Brown Algae	Absent	P/A		09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Xanthophyta, Yellow-Green Algae	Absent	P/A		09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Cryptophyta, Cryptomonads	Absent	P/A		09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Dinoflagellata, Dinoflagellates	Absent	P/A		09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Ciliophora, Ciliates	Absent	P/A		09/07/16 14:30 RND	09/07/16 17:00 RND
Algae SM10900B (No Cert. Avail.)	Flagellates	Absent	P/A		09/07/16 14:30 RND	09/07/16 17:00 RND
Microcystin-LR by LCMSMS (Non-certified)	Microcystin-LR	BPQL	ug/L	0.200	09/08/16 11:05 MMV	09/08/16 17:28 MMV

Notes and Definitions

Sample(s) for Geosmin 6040 & Blue-Green algae (Microcystin-LR) analysis recieved in plastic container.

_P Present

_A Absent

#53 Analyte recoveries are outside of acceptance limits. This failure does not invalidate data reported.

MCL Analyte concentration may exceed Maximum Contaminant Limit (MCL) for EPA Primary or Secondary Drinking Water Regulations.

Analyte concentration may exceed regulatory limit.

PQL Practical Quantitation Limit - the method reporting limit (MRL) adjusted for any dilutions or other changes made to the sample to deal with interferences/matrix effects

BPQL Below Practical Quantitation Limit (if applicable).

The "Prep Date" of the QC analysis coincides with the characters of the appropriate QC Lab ID. (Example: S 9 A 02 15 - BLK = 2009, Jan 2, Batch #15 - Blank)

Lab Manager



Quality Control Data

Blank Data

QC Lab #	Test Group	Test	Result	PQL	Flags
S610811-BLK1	Geosmin & MIB by SM6040 D	Geosmin	BPQL ng/L	2.000	
S610811-BLK1	Geosmin & MIB by SM6040 D	MIB	BPQL ng/L	2.000	
S610834-BLK1	Microcystin-LR by LCMSMS (Non-certified)	Microcystin-LR	BPQL ug/L	0.200	

Laboratory Control Sample Data

Lab QC#	Test Group	Test Name	LCS Result	Spike Level	Units	% Rec.	Control Limits	Flags
S610811-BS1	Geosmin & MIB by SM6040 D	Geosmin	25.72	25.00	ng/L	103	80 - 120	
S610811-MRL1	Geosmin & MIB by SM6040 D	Geosmin	2.280	2.000	ng/L	114	50 - 150	
S610811-MRL2	Geosmin & MIB by SM6040 D	Geosmin	1.900	2.000	ng/L	95	50 - 150	
S610811-BS1	Geosmin & MIB by SM6040 D	MIB	28.95	25.00	ng/L	116	80 - 120	
S610811-MRL1	Geosmin & MIB by SM6040 D	MIB	2.320	2.000	ng/L	116	50 - 150	
S610811-MRL2	Geosmin & MIB by SM6040 D	MIB	1.960	2.000	ng/L	98	50 - 150	
S610834-BS1	Microcystin-LR by LCMSMS (Non-certified)	Microcystin-LR	7.28	8.000	ug/L	91	70 - 130	

LCS Duplicate Data

QC Lab#	Test Group	Test Name	LCS % Rec.	LCS Dup % Rec.	Recovery Limits	RPD	RPD Limit	Flags
S610811-BSD1	Geosmin & MIB by SM6040 D	Geosmin	103	112	80 - 120	9	20	
S610811-BSD1	Geosmin & MIB by SM6040 D	MIB	116	123	80 - 120	6	20	#53
S610834-BSD1	Microcystin-LR by LCMSMS (Non-certified)	Microcystin-LR	91	97	70 - 130	6	20	

Matrix Spike Data

QC Lab #	Test Group	Test Name	Sample Result	Units	Spike Result	Spike Level	% Rec.	Acceptance Limits	Flags
S610834-MS1	Microcystin-LR by LCMSMS (Non-certified)	Microcystin-LR	BPQL	ug/L	7.41	8.000	93	70 - 130	

Matrix Spike Duplicate Data

QC Lab #	Test Group	Test Name	Sample Result	Spike Result	Spike Level	Units	% Rec.	Rec. Limits	% RPD	RPD Limit	Flags
S610834-MSD1	Microcystin-LR by LCMSMS (Non-certified)	Microcystin-LR	BPQL	7.81	8.000	ug/L	98	70-130	5	20	

Quality Control Data

Surrogate Recovery Data

QC Lab#	Test Group	Test Name	% Recovery	Recovery Limits	Flags
6107065-01	Geosmin & MIB by SM6040 D	IPMP	98	80 - 115	
6107065-03	Geosmin & MIB by SM6040 D	IPMP	101	80 - 115	
S610811-BLK1	Geosmin & MIB by SM6040 D	IPMP	101	80 - 115	
S610811-BS1	Geosmin & MIB by SM6040 D	IPMP	102	80 - 120	
S610811-BSD1	Geosmin & MIB by SM6040 D	IPMP	110	80 - 120	

* Complete Entire COC to be in Compliance*

RUSH

Due Date



Chain of Custody

Client Name- **Guthrie PWA**
 Project Name- **Water Analysis**

Accurate Work Order #	Date Sample Taken	Time Sample Taken	Matrix or Source (Refer. below)	Grab (G) or Comp (C)	Client I.D. / Sample Location or DEQ / EPA Location Code	Field Results (pH, Temp, Chlorine, ...) (note analysis & units)		Analysis Requested → # of Container ↓	ICE 1000ml	ICE 1000ml	ICE 1000ml			
						Location Code	Cl ₂							
6107065	9/7/2016	1054	Raw	G	Liberty Lake			1	1	+	+			
-03	9/7/2016	1051	DW	G	Water Plant			1	1	+	+			
-02	9/7/2016	1054	Raw	G	Liberty Lake									
-04	9/7/2016	1051	DW	G	Water Plant									

Sample Type - Routine Sample - Repeat Sample - Other - Special - Trigger Source

01/20/16dec Please include chlorine result.

Certification by Company Official: I hereby certify that the above sampling occurred during a period such that the sample(s) is/are representative of a typical operating day discharge for the above facility. Signature: Rory Nelson Date/Time: 9-7-16

Sampled By: Rory Nelson Company: City of Guthrie Sample Method: Grab

Relinquished By: _____ Date/Time: _____ Received By: _____ Date/Time: _____

Relinquished to Lab By: Rory Nelson Date/Time: 9-7-16 1155 Received at Lab By: Chad Rec'd °C: 12.3 Date/Time: 9/7/16 1155

Reporting Requirements (standard 10-15 working days) Compliance Reporting? Yes or No (DMR, PWS,) Oklahoma PWS ID # **Non Compliance** RUSH Request (if available) _____ (Working Days)

Mail Report To: Address: guthriewater@coxinet.net Phone #: 405-282-0532 Cell #: 405-476-5727

Mail Invoice To: Address: guthriewater@coxinet.net Phone #: _____ Fax #: _____ Bid # - _____ PO # - _____