BIO CHEM LAB, INC. PHONE: 254.829.8001 FAX: 254.829.8013
4751 TOKIO ROAD - WEST, TX 76691

ANALYTICAL REPORTS

CLIENT IDENTIFICATION INFORMATION:

CITY OF WEST
P O BOX 97
WEST, TX 76691
CLIENT CONTACT: CHARLES GILLASPIE, JR.

JUNE 2019 WEST	
REPORT ID:	WES-070819
LAB CONTACT:	ANDREW JANEK
REPORT DATE:	7.8.19
DRINKING WATER QUALITY PARAMETERS	

FIELD DATA / SAMPLE DESCRIPTION / METHOD

Collection Point		DS01 DSTWQP 1108 N. DAVIS ST.	DS01 DSTWQP 413 S. DAVIS ST.	DS01 EWQP P1550009A	PBCU005 EWQP G1550009E	PBCU0007 EWQP G1550009F
Date/ Time Collected		6.24.19 / 10:53	6.24.19 / 11:00	6.24.19 / 10:27	6.24.19 / 10:37	6.24.19 / 10:45
Date/ Time received by Lab		6.24.19 / 11:30	6.24.19 / 11:30	6.24.19 / 11:30	6.24.19 / 11:30	6.24.19 / 11:30
Laboratory Sample ID		10407-19	10408-19	10409-19	10410-19	10411-19
Sampling Description/Procedure		Collected with Client	Collected with Client	Collected with Client	Collected with Client	Collected with Client
Sample Type		Grab	Grab	Grab	Grab	Grab
Sample Matrix		Aqueous-PW	Aqueous-PW	Aqueous-PW	Aqueous-PW	Aqueous-PW
pH, SU	SM 4500-H+-B.	**7.94**	**6.85**	**6.84**	**7.90**	**7.80**
Temperature, C	SM 2500	**27.8**	**27.8**	**24.1**	**31.5**	**33.1**
Collector		C. Gilaspie / AJ	C. Gilaspie / AJ	C. Gilaspie / AJ	C. Gilaspie / AJ	C. Gilaspie / AJ

PARAMETER / UNIT / METHOD

Total Dissolved Solids, mg/L	SM 2540-C	**622.**	**322.**	**284.**	**621.**	**630.**
Reporting Limit, mg/L		20.	20.	20.	20.	20.
Dilution Factor		1	1	1	1	1
Date / Time Analyzed		6.27.19 / 10:25	6.27.19 / 10:25	6.27.19 / 10:25	6.27.19 / 10:25	6.27.19 / 10:25
Analyst Initials		SH	SH	SH	SH	SH
Chloride, mg/L	EPA 300.0	Q **56.0**	Q **41.8**	Q **43.4**	Q **50.7**	Q **58.2**
Reporting Limit, mg/L		1.00	1.00	1.00	1.00	1.00
Dilution Factor		10	10	10	10	10
Date / Time Analyzed		6.26.19 / 18:04	6.26.19 / 18:26	6.26.19 / 18:46	6.26.19 / 19:06	6.26.19 / 19:25
Analyst Initials		JLJ	JLJ	JLJ	JLJ	JLJ
Sulfate, mg/L	EPA 300.0	Q **75.8**	Q **29.3**	Q **29.6**	Q **76.8**	Q **72.2**
Reporting Limit, mg/L		1.00	1.00	1.00	1.00	1.00
Dilution Factor		10	10	10	10	10
Date / Time Analyzed		6.26.19 / 18:04	6.26.19 / 18:26	6.26.19 / 18:46	6.26.19 / 19:06	6.26.19 / 19:25
Analyst Initials		JLJ	JLJ	JLJ	JLJ	JLJ
Electrical Conductivity, µmhos	SM 2510-B	**1,000**	**480.**	**450.**	**1,000**	**1,000**
Reporting Limit µmhos		100.	10.	10.	100.	100.
Dilution Factor		1	1	1	1	1
Date Analyzed		7.5.19 / 08:15	7.5.19 / 08:15	7.5.19 / 08:15	7.5.19 / 08:15	7.5.19 / 08:15
Analyst Initials		BF	BF	BF	BF	BF

ANALYTICAL NOTES, INTERPRETATIONS, METHOD DEVIATIONS OR ENVIRONMENTAL CONDITIONS:

NONE TO REPORT

STATEMENT OF COMPLIANCE/NON-COMPLIANCE:

The above analytical data was derived from submitted samples that have met all established acceptance criteria, unless otherwise qualified, and are compliant with the laboratory's Quality System. The Director of Operations or designee has authorized the release of this report. The results contained herein relate only to the Laboratory Sample ID(s) documented above. This analytical test report may not be reproduced except in full, without the written approval of the laboratory.

Quality Assurance / Quality Control Data associated with results within this report are documented in the attached QA/QC Report.

Please contact 254.829.8001 with any questions or concerns.

Andrew Janek, Technical Director
Bio Chem Lab, Inc.

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DRINKING WATER QUALITY PARAMETERS	

ANALYTICAL BATCH QC

TDS — SM 2540-C

DATE	SETUP ID	BATCH ID	ANALYST
6.27.19	DS-062719-06	DS-062719-06-01	SH
SAMPLE ID:	**RESULT 1**	**RESULT 2**	**% DEV**
10407-19	622	632	0.8
SPIKE ID:	**RESULT 1**	**RESULT 2**	**% REC**
10408-19	322	796	94.8
		LOQ, %REC	98.1
BLANK, mg/L	ND	**LCS, %REC**	101.0

CHLORIDE — EPA-300.0

SETUP DATE	SEQUENCE ID		ANALYST
6.26.19	IC-062619-13		JLJ
SAMPLE ID	**RESULT 1**	**RESULT 2**	**% DEV**
10411-19	58.2	57.8	0.3
SPIKE ID:	**RESULT 1**	**RESULT 2**	**% REC**
10411-19	58.2	147.5	89.3
IPCS-1 % REC:	90.2	**IPCS-2 % REC:**	92.1
LCS % REC:	**Q2 84.3**	**LCSD % REC:**	**Q2 84.3**
BLANK, mg/L:	ND	**LOQ % REC**	97.2

SULFATE — EPA-300.0

SETUP DATE	SEQUENCE ID		ANALYST
6.26.19	IC-062619-13		JLJ
SAMPLE ID	**RESULT 1**	**RESULT 2**	**% DEV**
10411-19	72.2	72.0	0.1
SPIKE ID:	**RESULT 1**	**RESULT 2**	**% REC**
10411-19	72.2	163.5	91.3
IPCS-1 % REC:	90.9	**IPCS-2 % REC:**	91.8
LCS % REC:	**Q2 85.2**	**LCSD % REC:**	**Q2 84.1**
BLANK, mg/L:	ND	**LOQ % REC**	87.2

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ANALYTICAL BATCH QC

ELECTRICAL CONDUCTIVITY — SM20-2510-B

SETUP DATE	SETUP ID		ANALYST
7.5.19	EC-070519-01		BF
SAMPLE ID	**RESULT 1**	**RESULT 2**	**% DEV**
10410-19	1000	1000	0.0
561721111	1500	1500	0.0
LCS % REC	100.0	**LCSD % REC**	100.0
BLANK, uhmos	ND	**LOQ % REC**	90.0

QC DATA LEGEND - ACCEPTABLE RANGES

TDS ANALYSIS

% DEV: PRECISION ACCEPTABLE RANGE 0-10%

LCS % REC: ACCEPTABLE RECOVERY 80-120%

MS % REC: ACCEPTABLE RECOVERY 80-120%

BLANK: < 0.0005 g

ANION ANALYSIS

% DEV: PRECISION ACCEPTABLE RANGE 0-10%

BLANK: LESS THAN 0.05 mg/L OF TARGET ANION

LCS % REC/ QCS: ACCEPTABLE RECOVERY 90-110%

MS % REC: ACCEPTABLE RECOVERY 80-120% (SPIKE)

IPCS-1 % REC: ACCEPTABLE RECOVERY 90-110% (INSTRUMENT PERFORMANCE CHECK / INITIAL)

IPCS-2 % REC: ACCEPTABLE RECOVERY 90-110% (INSTRUMENT PERFORMANCE CHECK / FINAL)

ELECTRICAL CONDUCTIVITY

% DEV: PRECISION ACCEPTABLE RANGE 0-10%

LCS % REC: ACCEPTABLE RECOVERY 80-120%

MS % REC: ACCEPTABLE RECOVERY 80-120%

BLANK: < 10.0g

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BCL PROJECT DATA QUALIFIERS:

Q	Failed Quality Data. Refer to QA/QC Report of the affected data for specific details.
Q1	Blank outside desired limits. Data accepted based on passing batch LCS recoveries.
Q2	LCS recovery outside desired limits. Data accepted on basis of additional narrative if applicable
Q3	Matrix Spike and/or Matrix Spike Duplicate outside desired limits. Data accepted on basis of passing LCS recoveries.
Q4	Sample specific duplicate precision outside desired range.
QM1	Microbiology precision unable to be evaluated due to low background concentration (< 10 CFU / MPN) of target analyte
QM2	Microbiology precision unable to be evaluated due to high background concentration (> 2420 CFU / MPN) of target analyte
QM3	Microbiology precision outside desired range.
B1	Results for CBOD / BOD reported as less than [< 2 mg/L] with no sample dilution depleting method required 2.00 mg/L
B2	Results for CBOD / BOD reported as an estimate due to no dilution meeting a method stated depletion criteria.
B3	Result for CBOD / BOD unable to be determined due to excessive oxidant content, high chlorine residual.
W1	Result is an average of multiple weighing / drying cycles.
C	Reported result over the laboratory's calibration range
J5	Reported result less than the laboratory reporting limit but greater than the Limit of Detection.
ND	Not detected
V	Additional sample volume would have been required to meet analytical method specifications.
HT	Sample analysis performed outside method / regulatory prescribed holding time.
T	Sample received outside method / regulatory prescribed requirements for thermal preservation.
P	Sample received outside method / regulatory prescribed requirements for pH preservation.
A	Analysis performed that is currently outside the laboratory's scope of accreditation.
N	The associated analysis was performed by a network / sub-contract laboratory.
L	Laboratory Error
PW	Potable Water
NPW	Non-Potable Water

ADDITIONAL NOTES:

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DRINKING WATER QUALITY PARAMETERS

Reformed by BCL

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
WATER QUALITY PARAMETER MONITORING FORM 20679

Completed by PWS (or Agent)

PWS Name: City of West
PWS ID#: TX 1550009
PWS Address: P.O. Box 97 West, Tx 76691
PWS Contact: C.J. Gillaspie
PWS Contact Phone #: 254.826.5351
Inhibitor or Stabilizer Used (Y): Phosphate | Silica | Calcium carbonate
TREATMENT: Alkalinity Dosage Rate: | Inhibitor Dosage Rate: | Laboratory Contact Phone #:

Completed by Laboratory

Laboratory Name: Bio Chem Lab
TCEQ Lab ID #: TX 257
Laboratory Address: 4751 Tokio Rd. West, Tx 76691
Laboratory Contact: Andy Janek
Laboratory Contact Phone #: 254.829.8001

Sample Information

Sample Type (√): Compliance | Non-compliance
Sample Collector (√): Public Water System | Accredited Lab | 3rd Party Contractor --> LAB ID: AL
Temperature and pH (Y or N): Y Are temperature and pH included on the sampling entity's Laboratory Approval Form on file at the TCEQ? | Y Were temperature and pH measured in the field within 15 minutes of sample collection?

Parameters Requested: Analyses are required for the parameters checked. * If inhibitors containing phosphate or silica are used, then these parameters should also be analyzed depending on which is in use.

Facility ID (e.g. DS01, PBCU001)	Sample Point ID (e.g. DSTWQP, EWQP)	Sample Location	Sample Collection: Date (MMDDYY)	Sample Collection: Time - 24 hr (HHMM)	Field Measurements: pH	Field Measurements: Temp (°C)	Replacement? (S)	Original Sample ID #	Original Sample Date (MMDDYY)	Lab Sample ID	Alkalinity (1927)	Calcium (1919)	Chloride (1017)	Conductivity (1064)	Hardness (1915)	Iron (1028)	Manganese (1032)	Sodium (1052)	Sulfate (1055)	TDS (1930)	O-Phosphate (1044) *	Silica (1049) *
DS01	DSTWQP	1108 N. Davis St.	062419	1053	7.94	27.8				10407-19	√	√	√	√	√	√	√	√	√	√		
DS01	DSTWQP	413 S. Davis St.	062419	1100	6.85	27.8				10408-19	√	√	√	√	√	√	√	√	√	√		
PBC0008 DS07	EWQP	PBS00094 Plant 7	062419	1027	6.84	24.1				10409-19	√	√	√	√	√	√	√	√	√	√		
PBCU005	EWQP	GPS00095E Well 6 Davis	062419	1037	7.9	31.5				10410-19	√	√	√	√	√	√	√	√	√	√		
PBCU007	EWQP	GPS00097F Tokio Rd/S. Reagan St.	062419	1045	7.8	33.1				10411-19	√	√	√	√	√	√	√	√	√	√		

I acknowledge that information on this form is true and correct and sites selected for sampling follow the instructions in the TCEQ Monitoring and Sample Collection Guidance for Water Quality Parameters. This includes, but not limited to the measurement of pH and temperature immediately upon collection. Falsification of this form or tampering with water samples is a crime punishable under state and/or federal law. (Texas Penal Code, Title 8, Chapter 37.10)

Sample Conditions Upon Receipt (√)

Y Samples received unpreserved? | Y Iced | Ambient
Rejection Code (if applicable): | Actual / Corrected sample temperature: 15.7/15.2
Date & Time of Sample Preservation (Acidified): | Thermometer ID #: IR1

Name of Authorized PWS Representative (Print): C.J. Gillaspie
Signature:
Organization: City of West
Date: 6.24.19

Chain of Custody

Relinquished By (Signature): Date/Time: 6.24.19/1130
Relinquished by Courier (Signature): Date/Time: —
Received By Lab (Signature): Date/Time: 6.24.19 1130
Received By Courier (Signature): Date/Time: —

Laboratory Comments:

TCEQ 20679 (Rev 01/2018)