

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 LORENA
 107-A S. FRONTAGE ROAD
 LORENA, TX 76655
 CONTACT: KEVIN NEAL
 PHONE: 254.857.4641

JUNE 2018 CITY OF LORENA

REPORT ID: LOR-070918
LAB CONTACT: ANDREW JANEK
REPORT DATE: 7.9.18
DRINKING WATER QUALITY PARAMETERS

FIELD DATA / SAMPLE DESCRIPTION / METHOD

	PBCU002 EWQP 1850 OLD WACO TEMPLE RD	PBC0003 EWQP 704 N. OLD TEMPLE RD	DS01 DSTWQP 401 LEE LANE	DS01 DSTWQP 1191 OLD LORENA RD
Collection Point				
Date/ Time Collected	6.18.18 / 14:46	6.18.18 / 14:55	6.18.18 / 15:05	6.18.18 / 15:15
Date/ Time received by Lab	6.18.18 / 16:15	6.18.18 / 16:15	6.18.18 / 16:15	6.18.18 / 16:15
Laboratory Sample ID	6601-18	6602-18	6603-18	6604-18
Sampling Description/Procedure	Client Collected	Client Collected	Client Collected	Client Collected
Sample Type	Grab	Grab	Grab	Grab
Sample Matrix	Aqueous-NPW	Aqueous-NPW	Aqueous-NPW	Aqueous-NPW
Collector	K. Neal	K. Neal	K. Neal	K. Neal

PARAMETER / UNIT / METHOD

Total Dissolved Solids, mg/L	SM ₂₀ 2540-C	490.	748.	510.	486.
Reporting Limit, mg/L		10.	10.	10.	10.
Dilution Factor		1	1	1	1
Date / Time Analyzed		6.21.18 / 17:15	6.21.18 / 17:15	6.21.18 / 17:15	6.21.18 / 17:15
Analyst Initials		SW	SW	SW	SW

Chloride, mg/L	EPA-300.0	70.7	83.4	64.6	67.8
Reporting Limit, mg/L		1.00	1.00	1.00	1.00
Dilution Factor		10	10	10	10
Date / Time Analyzed		6.28.18 / 17:19	6.28.18 / 17:38	6.28.18 / 17:58	6.28.18 / 18:18
Analyst Initials		JLJ	JLJ	JLJ	JLJ

Sulfate, mg/L	EPA-300.0	96.4	134.	93.4	89.3
Reporting Limit, mg/L		1.00	1.00	1.00	1.00
Dilution Factor		10	10	10	10
Date / Time Analyzed		6.28.18 / 17:19	6.28.18 / 17:38	6.28.18 / 17:58	6.28.18 / 18:18
Analyst Initials		JLJ	JLJ	JLJ	JLJ

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Collector	K. Neal	K. Neal	K. Neal	K. Neal

PARAMETER / UNIT / METHOD

Electrical Conductivity, μmhos	SM ₂₀ -2510-B	780.	1,200	848.	795.
Reporting Limit		10.0	10.0	10.0	10.0
Dilution Factor		1	1	1	1
Date Analyzed		6.25.18 / 21:00	6.25.18 / 21:00	6.25.18 / 21:00	6.25.18 / 21:00
Analyst Initials		AJ / BF	AJ / BF	AJ / BF	AJ / 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.

**DATA QUALIFIERS**

HT- Holding Time **T-** Thermal preservation **P-** pH Preservation **V-** Sample Volume Inadequate **ND-** Not Detected
O- Outside of Laboratory's Accreditation **L-** Laboratory Error **Q-** Failed Quality Data

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REPORT DATE: 7.9.18

QUALITY CONTROL SUMMARY

ANALYTICAL BATCH QC

TDS SM₂₀ 2540-C

DATE	SETUP ID	BATCH ID	ANALYST
6.21.18	DS-062118-05	DS-062118-05-01	SH / SW
SAMPLE ID:	RESULT 1	RESULT 2	% DEV
6603-18	510	514	0.4
SPIKE ID:	RESULT 1	RESULT 2	% REC
6646-18	352	816	92.8
BLANK, mg/L	ND	LCS, %REC	99.2

CHLORIDE EPA-300.0

SETUP DATE	SEQUENCE ID		ANALYST	
6.28.18	IC-062818-14		JLJ	
SAMPLE ID	RESULT 1	RESULT 2		% DEV
6604-18	67.8	68.0		0.1
6803-18	193.4	193.5		0.0
SPIKE ID:	RESULT 1	RESULT 2		% REC
6604-18	67.8	167.2		99.4
6803-18	193.4	389.5		98.1
IPCS-1 % REC	98.2	IPCS-2 % REC	99.3	
LCS % REC	94.2	LCSD % REC	94.3	
BLANK, mg/L	ND	QCS % REC	-----	

SULFATE EPA-300.0

SETUP DATE	SEQUENCE ID		ANALYST	
6.28.18	IC-062818-14		JLJ	
SAMPLE ID	RESULT 1	RESULT 2		% DEV
6604-18	89.3	90.5		0.7
6803-18	119.3	118.4		0.4
SPIKE ID:	RESULT 1	RESULT 2		% REC
6604-18	89.3	193.6		104.3
6803-18	119.3	320.2		100.5
IPCS-1 % REC	99.7	IPCS-2 % REC	103.0	
LCS % REC	97.1	LCSD % REC	97.2	
BLANK, mg/L	ND	QCS % REC	-----	

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JUNE 2018 CITY OF LORENA**REPORT ID: LOR-070918****LAB CONTACT: ANDREW JANEK****REPORT DATE: 7.9.18****QUALITY CONTROL SUMMARY AND DATA LEGENDS****ANALYTICAL BATCH QC****ELECTRICAL CONDUCTIVITY**

SM20-2510-B

SETUP DATE	SETUP ID		ANALYST	
6.25.18	EC-062518-01		AJ / BF	
SAMPLE ID	RESULT 1	RESULT 2		% DEV
6602-18	1200.0	1195.0		0.2
50271964	1400.0	1410.0		0.4
LCS % REC	99.4	LCSD % REC	100.7	
BLANK, mg/L	ND	QCS % REC	-----	

ANALYTICAL BATCH QC LEGEND**TDS ANALYSIS**

% DEV: PRECISION ACCEPTABLE RANGE 0-10%
 LCS % REC: ACCEPTABLE RECOVERY 80-120%
 MS % REC: ACCEPTABLE RECOVERY 80-120%
 BLANK: < 0.0005 g

IC ANALYSIS - QC LIMITS

% DEV: PRECISION ACCEPTABLE RANGE 0-10%
 LCS % REC: ACCEPTABLE RECOVERY 90-110%
 ICPS % REC: ACCEPTABLE RECOVERY 90-110%
 MS % REC: ACCEPTABLE RECOVERY 80-120%
 BLANK: < 0.05 MG/L

ELECTRICAL CONDUCTIVITY

% DEV: PRECISION ACCEPTABLE RANGE 0-10%
 LCS % REC: ACCEPTABLE RECOVERY 80-120%
 MS % REC: ACCEPTABLE RECOVERY 80-120%
 BLANK: < 10.0g

QC DATA LEGEND - ANALYTICAL FLAGS / QUALIFIERS

Q1: BLANK OUTSIDE METHOD SPECIFIED LIMITS
 Q2: LCS / STANDARD OUTSIDE METHOD SPECIFIED LIMITS
 Q3: MATRIX SPIKE/ MATRIX SPIKE DUPLICATE OUTSIDE METHOD SPECIFIED LIMITS
 Q4: PRECISION / DUPLICATE OUTSIDE METHOD SPECIFIED LIMITS
 QM: MICRO QUALIFIER: SEE INCLUDED NARRATIVE

QUALITY DATA NOTES / INTERPRETATIONS / NONCONFORMANCES:**NONE TO REPORT****DATA QUALIFIERS FOR OUT OF RANGE QUALITY ACCEPTANCE CRITERIA**

Q1 - BLANK (METHOD SPECIFIC) **Q2** - LCS (80-120% RECOVERY) **Q3** - SPIKE / MATRIX SPIKE DUPLICATE (80-120% RECOVERY)
Q4 - PRECISION / DUPLICATE ((0-10% DEVIATION) TSS (0-5% DEVIATION)) **QM** - MICRO NARRATIVE

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REPORT DATE: 7.9.18
CHAIN OF CUSTODY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY WATER QUALITY PARAMETER MONITORING FORM 20679																																	
Completed by PWS (or Agent)					Completed by Laboratory																												
PWS Name:	City of Lorena				Laboratory Name:																												
PWS ID#:	TX 155 0036				TCEQ Lab ID #:																												
PWS Address:	107-A S. Frontage Rd. Lorena, TX 76655				Laboratory Address:																												
PWS Contact:	Kevin Neal				Laboratory Contact:																												
PWS Contact Phone #:	254.857.4641				Laboratory Contact Phone #:																												
Inhibitor or Stabilizer Used (Y/N):	Phosphate	Silica	Calcium carbonate																														
TREATMENT	Alkalinity Dosage Rate:	Inhibitor Dosage Rate:																															
Sample Information																																	
Sample Type (Y/N):	Compliance	Non-compliance																															
Sample Collector (Y/N):	Public Water System	Accredited Lab																															
Temperature and pH (Y or N):	Yes temperature and pH included on this sampling entry's Laboratory Approval Form or the TCEQ?	3rd Party Contractor -> LAB ID AL																															
Sample Point ID (e.g., DS01, DSTWAP, EMQ2)	Sample Location	Date (MM/DD/YY)	Time - 24 hr (HHMM)	pH	Temp (°C)	Replacement?	Original Sample ID #	Original Sample Date (MM/DD/YY)	Lab Sample ID																								
DS01	1850 Old Lakes Temple Rd.	06/18/18	1446	7.5	32.7				6601-18																								
DS01	704 N. Old Temple Rd.	06/18/18	1455	7.6	35.5				6602-18																								
DS01	401 Lee Ln.	06/18/18	1505	7.5	29.4				6603-18																								
DS01	1191 Old Lorena Rd.	06/18/18	1515	7.6	31.4				6604-18																								
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.																																	
<table border="1"> <thead> <tr> <th>Alkalinity (1827)</th> <th>Calcium (1819)</th> <th>Chloride (1017)</th> <th>Conductivity (1084)</th> <th>Hardness (1815)</th> <th>Iron (1028)</th> <th>Manganese (1032)</th> <th>Sodium (1052)</th> <th>Sulfate (1055)</th> <th>TDS (1830)</th> <th>O-Phosphate (1044)</th> <th>Silica (1049)</th> </tr> </thead> <tbody> <tr> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr> </tbody> </table>										Alkalinity (1827)	Calcium (1819)	Chloride (1017)	Conductivity (1084)	Hardness (1815)	Iron (1028)	Manganese (1032)	Sodium (1052)	Sulfate (1055)	TDS (1830)	O-Phosphate (1044)	Silica (1049)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																						
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Name of Authorized PWS Representative (Print) <u>Kevin Neal</u> Signature <u>Kevin Neal</u> Organization <u>City of Lorena</u> Date <u>6.18.18</u> Chain of Custody: Relinquished By (Signature) <u>Kevin Neal</u> Date/Time: <u>06.18.18/1615</u> Relinquished By (Signature) <u>Andrew Janek</u> Date/Time: <u>6/18/18</u> Received By (Signature) <u>Andrew Janek</u> Date/Time: <u>6/18/18</u> (BCL) <u>6/18/18</u> Date/Time: <u>9/15</u> Laboratory Comments: <u>Store in PM Fridge until needed</u> (6-19-18)																																	

FINAL REPORT REVIEW: