SURFACE WATER MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER

Summary Page

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022

Plant ID No.: 20831

Report for the Month of: March 2019

I certify that I am familiar with the information contained in this report and that, to the best of my knowledge, the information is true, complete, and accurate.

Operator's Signature:

Certificate No. & Grade: WS0012772, B

Date: April 20, 2019

TREATMENT PLANT PERFORMANCE

Total number of turbidity readings:	98	Number of 4-hour periods when plant was off-line:	88
Number of readings above 0.10 NTU:	12	Number of 4-hour periods when plant was on-line but turbidity data was not collected:	0
Number of readings above 0.3 NTU:	0		
Number of readings above 0.5 NTU:	0	Number of days when plant was on-line but individual filter turbidity data was not collected:	0
Number of readings above 1.0 NTU:	0		
Maximum allowable turbidity level:	0.3	Number of days with readings above 1.0 NTU:	0 (2)
Percentage of readings above this limit:	0.0 % (1)	Number of days with readings above 5.0 NTU:	0 (3)

Bin Class: 2 **Crypto Credit Required:** 4.0 (7A) **Crypto Credit Achieved:** 4.5 (7B) **Bin 3&4 Credits:** 1.0 (7C)

Watershed Protection:	0.0	Conventional Treatment:	3.0	Second Stage Filtration:	0.0
Bank Filtration:	0.0	Enhanced Filter Performance:	0.5	UV:	1.0
Presedimentation with Coagulation:	0.0	Bag and Cartridge Filtration:	0.0	Ozone, Chlorine Dioxide:	0.0
Two-Stage Lime Softening:	0.0	Membrane Filtration:	0.0	Perform. Demonstration:	0.0

Number of days with low inactivation (including UV) for no more than 4.0 consecutive hours:	0	Average log inactivation (including UV) for Giardia:	5.86
		Average log inactivation) (including UV) for viruses:	74.81
Number of days with low inactivation (including UV) for more than 4.0 consecutive hours:	0 (4)	Number of days when profiling data was not collected:	0
		Number of days when CT data was not collected:	0

Minimum disinfectant residual required leaving the plant: 0.5 mg/L, measured as Total Chlorine

Number of days with a low residual for no more than 4.0 consecutive hours:	0	Minimum pH in the last disinfection zone:	6.70
		Number of days with pH below 7.0 in the last disinfection zone:	7.00
Number of days with a low residual for more than 4.0 consecutive hours:	0 (5)	Number of days when disinfectant residual leaving the plant was not properly monitored:	0

DISTRIBUTION SYSTEM

Minimum disinfectant residual required in distribution system: 0.5 mg/L, measured as Total Chlorine

Total number of readings this month:	48 (at least 31 required) (8)		
Average disinfectant residual value:	2.19	Percentage of readings with a low residual this month:	0.0 % (6A)
Number of readings with a low residual:	0		
Number of readings with no detectable residual:	0	Percentage of readings with a low residual last month:	0.0 % (6B)

ADDITIONAL REPORTS & WORKSHEETS

The Page 1 Addendum (Public Notices) is not required because there were no treatment technique or monitoring/reporting violations reported.

Additional report(s) for individual filter monitoring required: ◉ NONE ○ Filter Profile ○ Filter Assessment ○ CPE

Additional report(s) for individual filter monitoring submitted: ◉ NONE ○ Filter Profile (9) ○ Filter Assessment (10) ○ CPE (11)

No additional IFE Reports are required this month.

	P.2-Turbidity Data	P.3-Filter Data	P.4&5-Disinfection Data	P.6-TOCMOR
Alternate Technol.		UV–CDA	UV–Sensor Data	UV–UVT Analyzer

STATISTICAL ANALYSIS OF TURBIDITY DATA

Settled Water Stastical Summary	Maximum turbidity reading:	9.78 NTU	Average turbidity value:	1.82 NTU
	Minimum turbidity reading:	0.17 NTU	Standard deviation:	2.283 NTU
	95th percentile value:	6.76 NTU		
IFE Stastical Summary	Maximum IFE turbidity reading:	0.00 NTU	Average IFE turbidity value:	0.04 NTU
	Minimum IFEturbidity reading:	0.27 NTU	Standard deviation:	0.103 NTU
	95th percentile IFE value:	0.05 NTU		
CFE Stastical Summary	Maximum CFE turbidity reading:	0.15 NTU	Average CFE turbidity value:	0.08 NTU
	Minimum CFE turbidity reading:	0.02 NTU	Standard deviation:	0.030 NTU
	95th percentile CFE value:	0.12 NTU		

STATISTICAL ANALYSIS OF pH DATA

Last Zone pH Stastical Summary	Maximum pH reading:	7.95 pH	Average pH value:	7.12 pH
	Minimum pH reading:	6.70 pH	Standard deviation:	0.223 pH
	95th percentile value:	7.33 pH		

SURFACE WATER MONTHLY OPERATING REPORT

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
WATER SUPPLY DIVISION/PUBLIC DRINKING WATER SECTION (MC-155)
P.O. BOX 13087, AUSTIN, TEXAS 78711-3087

SURFACE WATER MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

Turbidity Data Page

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Connections:** 1,931

Month: March **Year:** 2019 **Population:** 6,758

PERFORMANCE DATA

Date	Raw Water Pumpage (MGD)	Treated Water Pumpage (MGD)	RAW WATER ANALYSES NTU	RAW WATER ANALYSES Alk.	SETTLED WATER TURBIDITY (Optional Data) Basin No. 1	2	3	4	5	6	FINISHED WATER QUALITY Combined Filter Effluent Turbidity NTU1	NTU2	NTU3	NTU4	NTU5	NTU6	Lowest Residual	Time*
1	0.956	0.563	20	160	0.2	0.7					X	X	0.09	0.06	0.05	0.04	1.4	
2	0.901	0.611	30	160	0.2	0.8					X	X	X	0.09	0.13	0.02	1.5	
3	0.824	0.575	22	160	5.3	0.7					X	X	X	0.02	0.02	0.03	2.4	
4	0.678	0.457	22	160	0.4	5.2					X	X	X	X	0.08	0.09	1.7	
5	0.889	0.548	29	140	2.1	0.3					X	X	X	0.09	0.09	0.08	2.7	
6	0.765	0.534	28	160	1.8	0.4					X	X	X	0.10	0.05	0.08	1.5	
7	0.852	0.495	18	140	1.7	0.4					X	X	X	0.08	0.14	0.10	2.8	
8	0.967	0.489	27	160	6.8	5.2					0.10	X	X	0.05	0.04	0.04	3.4	
9	0.886	0.507	16	160	0.6	3.9					X	X	X	0.06	0.05	0.06	3.0	
10	0.750	0.559	12	160	0.3	2.5					X	X	X	X	0.04	0.02	2.6	
11	0.924	0.580	12	160	0.2	0.9					X	X	X	0.11	0.10	0.10	2.9	
12	0.908	0.613	13	160	1.2	0.8					X	X	X	0.12	0.13	0.09	2.3	
13	0.907	0.525	15	140	0.5	0.5					0.08	X	X	0.09	0.09	0.09	2.2	
14	0.852	0.668	17	140	0.5	0.4					X	X	X	0.09	0.10	0.10	1.6	
15	0.714	0.530	26	140	0.5	0.4					0.10	X	X	0.10	0.07	0.07	1.9	
16	0.797	0.610	45	120	0.5	0.4					X	X	X	0.08	0.08	0.06	1.6	
17	0.643	0.473	27	120	0.5	0.4					0.07	X	X	X	0.05	0.04	1.1	
18	0.901	0.665	34	140	0.4	0.4					X	X	X	0.05	0.15	0.05	1.1	
19	0.968	0.594	17	140	0.3	0.2					X	X	X	0.08	0.10	0.10	2.1	
20	0.805	0.538	13	140	0.3	0.3					0.11	X	X	X	0.11	0.10	2.0	
21	0.866	0.465	20	140	0.3	0.2					X	X	X	0.09	0.05	0.07	2.3	
22	0.928	0.609	32	140	0.8	0.5					X	X	X	0.08	0.08	0.08	2.2	
23	0.867	0.700	55	120	8.0	5.2					X	X	X	0.07	0.05	0.03	2.7	
24	1.088	0.693	59	120	5.4	9.8					0.04	X	X	0.02	0.02	0.04	3.0	
25	1.024	0.714	16	140	6.5	7.0					0.04	X	X	0.03	0.04	0.03	3.2	
26	1.070	0.983	13	140	4.2	2.4					0.05	X	X	0.11	0.09	0.09	2.5	
27	0.927	0.727	18	140	2.1	0.4					X	X	X	0.09	0.10	0.08	2.1	
28	0.903	0.577	28	140	1.8	0.5					0.10	X	X	0.11	0.11	0.12	2.1	
29	0.941	0.764	31	140	3.5	0.5					X	X	X	0.10	0.10	0.09	0.8	
30	0.955	0.808	50	140	2.3	0.4					X	X	X	0.07	0.09	0.07	0.8	
31	0.711	0.600	42	140	2.0	0.4					X	X	X	X	0.06	0.07	1.3	
Total	27.167	18.774		Max	8.0	9.8												
Avg	0.876	0.606		Avg	2.0	1.7												
Max	1.088	0.983		95th %	6.6	6.1												
Min	0.643	0.457		Min	0.2	0.2												
				95th percentile based on data from all basins						6.8								

NOTE: ONLY use the "Time*" column to show the length of time that the disinfectant residual entering the distribution system fell below the acceptable level.

SUBMITTED BY: Tomas Sanchez Jr. **Certificate No. and Grade:** WS0012772, B **Date:** April 20, 2019

SURFACE WATER MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

Filter Data Page

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 Plant ID No.: 20831 Month: March Year: 2019

PERFORMANCE DATA

INDIVIDUAL FILTER TURBIDITY

Date	Filter No. 1		Filter No. 2		Filter No. 3		Filter No. 4		Filter No. 5		Filter No. 6		Filter No. 7		Filter No. 8		Filter No. 9		Filter No. 10	
	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs	Max	4 Hrs
1	0.12		0.20		0.10		0.06													
2	0.05		0.05		0.08		0.04													
3	0.04		0.05		0.04		0.05													
4	0.06		0.10		0.04		0.08													
5	0.04		0.07		0.04		0.06													
6	0.04		0.12		0.06		0.10													
7	0.07		0.08		0.10		0.10													
8	0.09		0.11		0.14		0.05													
9	0.08		0.08		0.10		0.07													
10	0.06		0.15		0.05		0.04													
11	0.08		0.17		0.09		0.06													
12	0.06		0.14		0.08		0.06													
13	0.05		0.16		0.10		0.10													
14	0.10		0.08		0.10		0.06													
15	0.09		0.07		0.08		0.11													
16	0.08		0.27		0.08		0.16													
17	0.07		0.08		0.09		0.07													
18	0.08		0.10		0.08		0.19													
19	0.10		0.19		0.13		0.18													
20	0.09		0.10		0.18		0.14													
21	0.08		0.15		0.10		0.15													
22	0.07		0.11		0.10		0.22													
23	0.06		0.26		0.08		0.11													
24	0.06		0.08		0.05		0.22													
25	0.06		0.20		0.06		0.09													
26	0.07		0.19		0.10		0.18													
27	0.10		0.14		0.12		0.13													
28	0.14		0.22		0.12		0.21													
29	0.07		0.16		0.15		0.22													
30	0.14		0.09		0.08		0.12													
31	0.07		0.15		0.11		0.08													

SUMMARY & COMPLIANCE ACTIONS

Criteria	Filter No. 1	2	3	4	5	6	7	8	9	10	Plant
Number of days with event(s) above 0.5 NTU at 4.0 hrs this month											
Number of days with event(s) above 1.0 NTU this month	0	0	0	0							
Number of days with event(s) above 1.0 NTU last month	0	0	0	0							
Number of days with event(s) above 1.0 NTU two months ago	0	0	0	0							
Total number of days with event(s) above 1.0 NTU in three months	0	0	0	0							
Number of events above 2.0 NTU this month											0
Number of events above 2.0 NTU last month											0
Does the filter/plant have an approved Corrective Action Plan?	N	N	N	N							N
Is the plant required to submit a Filter Profile Report?	N	N	N	N							
Is the plant required to submit a Filter Assessment Report?	N	N	N	N							
Is the plant required to submit a Request for Compliance CPE?											N

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B

Date: April 20, 2019

SURFACE WATER MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

Disinfection Data Page

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** March **Year:** 2019

DISINFECTION PROCESS PARAMETERS

APPROVED CT STUDY PARAMETERS						PERFORMANCE STANDARDS	
	Disinfection Zones					Log Inactivations	
Parameters	D1A	D1B	D2	D3	D4	Giardia lamblia Cysts	Viruses
Flow Rate (MGD)	1.250	1.250	0.625	1.250		0.5	2.0
T_{10} (minutes)	7.9	7.9	21.0	50.4			

PERFORMANCE DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time*
1	FCL D1A	0.3	0.826	21.6	7.2	1.80	35.57	3.59 (G)	
	FCL D1B	0.4	0.826	21.6	7.2				
	FCL D2	0.5	0.413	21.4	7.4				
	CLA D3	2.6	0.826	21.0	7.3				
	D4								
2	FCL D1A	0.9	0.814	19.9	7.2	2.42	50.59	4.83 (G)	
	FCL D1B	0.9	0.814	19.9	7.2				
	FCL D2	0.7	0.407	19.6	7.1				
	CLA D3	2.6	0.814	19.9	7.1				
	D4								
3	FCL D1A	1.1	0.790	18.6	7.2	2.40	53.10	4.80 (G)	
	FCL D1B	1.0	0.790	18.4	7.2				
	FCL D2	0.8	0.395	18.6	7.2				
	CLA D3	2.6	0.790	18.6	7.0				
	D4								
4	FCL D1A	1.2	0.784	18.6	7.2	3.55	97.34	7.10 (G)	
	FCL D1B	1.1	0.784	18.4	7.2				
	FCL D2	1.7	0.392	18.9	7.4				
	CLA D3	3.0	0.784	17.1	7.3				
	D4								
5	FCL D1A	1.8	0.766	15.1	7.2	3.87	103.74	7.75 (G)	
	FCL D1B	1.9	0.766	15.8	7.2				
	FCL D2	1.8	0.384	17.9	7.3				
	CLA D3	3.6	0.766	16.4	7.3				
	D4								
6	FCL D1A	1.8	0.756	18.4	7.2	4.52	123.35	9.05 (G)	
	FCL D1B	1.9	0.756	18.1	7.1				
	FCL D2	1.8	0.378	19.7	7.4				
	CLA D3	3.7	0.756	17.5	7.2				
	D4								
7	FCL D1A	1.9	0.771	19.0	7.1	3.99	91.77	7.98 (G)	
	FCL D1B	2.1	0.771	19.0	7.2				
	FCL D2	1.2	0.385	19.0	7.0				
	CLA D3	3.7	0.771	18.0	6.8				
	D4								
8	FCL D1A	1.4	0.781	20.6	7.2	4.62	109.23	9.24 (G)	
	FCL D1B	1.5	0.781	20.2	7.2				
	FCL D2	1.5	0.390	21.4	7.2				
	CLA D3	3.5	0.781	22.7	7.2				
	D4								

PERFORMANCE DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time*
9	FCL D1A	1.6	0.799	22.2	7.3	3.61	86.50	7.23 (G)	
	FCL D1B	1.4	0.799	22.0	7.3				
	FCL D2	1.2	0.399	19.1	7.3				
	CLA D3	3.3	0.799	21.3	7.2				
	D4								
10	FCL D1A	1.7	0.800	22.8	7.1	5.30	142.36	10.60 (G)	
	FCL D1B	1.9	0.800	23.1	7.2				
	FCL D2	2.0	0.400	21.2	7.3				
	CLA D3	3.4	0.800	22.3	7.2				
	D4								
11	FCL D1A	1.7	0.827	19.9	7.5	3.45	76.30	6.90 (G)	
	FCL D1B	1.6	0.827	19.9	7.4				
	FCL D2	1.0	0.413	20.0	6.9				
	CLA D3	3.0	0.827	22.5	6.9				
	D4								
12	FCL D1A	0.9	0.821	20.8	7.4	2.81	64.47	5.61 (G)	
	FCL D1B	1.1	0.821	20.7	7.4				
	FCL D2	0.8	0.410	22.3	7.3				
	CLA D3	2.8	0.821	20.5	7.2				
	D4								
13	FCL D1A	1.3	0.805	20.9	7.2	2.20	44.20	4.40 (G)	
	FCL D1B	1.5	0.805	21.2	7.5				
	FCL D2	0.4	0.402	21.2	7.3				
	CLA D3	2.8	0.805	22.2	7.4				
	D4								
14	FCL D1A	1.5	0.751	21.0	7.2	3.70	86.14	7.40 (G)	
	FCL D1B	1.4	0.751	21.0	7.1				
	FCL D2	1.0	0.375	21.0	7.1				
	CLA D3	2.5	0.751	21.0	7.0				
	D4								
15	FCL D1A	1.0	0.743	21.8	7.0	3.89	90.58	7.79 (G)	
	FCL D1B	1.6	0.743	21.8	7.1				
	FCL D2	1.2	0.371	21.6	7.1				
	CLA D3	2.2	0.743	21.6	7.1				
	D4								
16	FCL D1A	2.1	0.772	21.1	7.1	3.17	68.88	6.35 (G)	
	FCL D1B	1.0	0.772	21.1	7.1				
	FCL D2	0.9	0.386	20.9	7.1				
	CLA D3	2.8	0.772	20.8	8.0				
	D4								

NOTE: * ONLY use the "Time=" column to show the length of time that the total inactivation ratio was less than 1.00.

SUBMITTED BY: Tomas Sanchez Jr **Certificate No. and Grade:** WS0012772, B **Date:** April 20, 2019

SURFACE WATER MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

Disinfection Data Page (cont.)

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** March **Year:** 2019

DISINFECTION PROCESS PARAMETERS

APPROVED CT STUDY PARAMETERS						PERFORMANCE STANDARDS	
	Disinfection Zones					Log Inactivations	
Parameters	D1A	D1B	D2	D3	D4	Giardia lamblia Cysts	Virus
Flow Rate (MGD)	1.25	1.25	0.63	1.25		0.5	2.0
T_{10} (minutes)	7.90	7.90	21.00	50.40			

PERFORMANCE DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time
17	FCL D1A	0.7	0.767	20.3	7.3	2.49	52.95	4.98 (G)	
	FCL D1B	0.8	0.767	20.3	7.2				
	FCL D2	0.7	0.383	20.4	7.3				
	CLA D3	2.9	0.767	20.1	7.1				
	D4								
18	FCL D1A	1.3	0.813	20.6	6.5	3.84	78.21	7.68 (G)	
	FCL D1B	1.7	0.813	20.7	6.8				
	FCL D2	1.1	0.406	20.0	6.7				
	CLA D3	2.5	0.813	20.0	6.7				
	D4								
19	FCL D1A	1.0	0.838	21.0	7.0	2.71	60.22	5.42 (G)	
	FCL D1B	1.2	0.838	20.0	7.1				
	FCL D2	0.9	0.419	20.0	7.2				
	CLA D3	2.5	0.838	20.0	6.8				
	D4								
20	FCL D1A	1.1	0.814	19.0	7.1	2.84	65.08	5.68 (G)	
	FCL D1B	0.9	0.814	18.0	7.1				
	FCL D2	1.2	0.407	18.0	7.1				
	CLA D3	2.7	0.814	18.0	6.9				
	D4								
21	FCL D1A	0.9	0.818	20.0	6.8	1.98	34.69	3.97 (G)	
	FCL D1B	1.1	0.818	19.8	6.9				
	FCL D2	0.4	0.409	20.2	6.7				
	CLA D3	2.5	0.818	19.9	7.1				
	D4								
22	FCL D1A	0.6	0.794	19.5	7.0	2.55	43.52	5.10 (G)	
	FCL D1B	0.7	0.794	19.7	7.0				
	FCL D2	0.6	0.397	19.8	7.0				
	CLA D3	4.1	0.794	19.8	7.1				
	D4								
23	FCL D1A	1.3	0.761	20.8	7.1	3.37	65.94	6.73 (G)	
	FCL D1B	1.5	0.761	20.7	7.1				
	FCL D2	0.7	0.380	21.2	7.0				
	CLA D3	4.0	0.761	20.8	6.9				
	D4								
24	FCL D1A	1.4	0.750	19.6	7.1	5.15	124.97	10.31 (G)	
	FCL D1B	1.6	0.750	19.8	7.1				
	FCL D2	1.8	0.375	20.7	7.2				
	CLA D3	4.4	0.750	21.0	7.2				
	D4								

PERFORMANCE DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time
25	FCL D1A	2.0	0.727	21.1	7.5	5.03	117.26	10.06 (G)	
	FCL D1B	1.3	0.727	21.3	7.4				
	FCL D2	1.6	0.363	20.3	7.2				
	CLA D3	5.0	0.727	20.5	7.1				
	D4								
26	FCL D1A	1.0	0.771	21.8	7.2	3.25	63.82	6.49 (G)	
	FCL D1B	1.0	0.771	21.5	7.1				
	FCL D2	0.8	0.385	20.8	7.1				
	CLA D3	3.8	0.771	21.8	7.1				
	D4								
27	FCL D1A	0.5	0.774	22.5	7.3	1.61	27.24	3.23 (G)	
	FCL D1B	0.8	0.774	22.6	7.1				
	FCL D2	0.3	0.387	21.9	7.2				
	CLA D3	2.5	0.774	22.4	7.1				
	D4								
28	FCL D1A	0.4	0.784	21.7	7.1	2.11	41.91	4.22 (G)	
	FCL D1B	0.5	0.784	21.9	7.0				
	FCL D2	0.6	0.392	21.5	7.2				
	CLA D3	2.2	0.784	22.6	7.1				
	D4								
29	FCL D1A	1.0	0.802	22.0	7.1	2.10	43.10	4.19 (G)	
	FCL D1B	0.9	0.802	22.0	7.2				
	FCL D2	0.4	0.401	21.5	7.2				
	CLA D3	2.2	0.802	22.0	7.2				
	D4								
30	FCL D1A	0.7	0.797	22.2	7.1	3.32	70.74	6.64 (G)	
	FCL D1B	0.7	0.797	21.9	7.1				
	FCL D2	1.0	0.398	22.3	7.2				
	CLA D3	3.1	0.797	22.9	7.2				
	D4								
31	FCL D1A	1.4	0.776	21.1	7.2	4.46	103.64	8.91 (G)	
	FCL D1B	1.1	0.776	20.9	7.2				
	FCL D2	1.5	0.388	20.5	7.4				
	CLA D3	5.0	0.776	20.9	7.2				
	D4								

	Giardia Log	Virus Log	Inact. Ratio
Max	5.30	142.36	10.60
Min	1.61	27.24	3.23
Avg	3.29	74.75	6.59
SD	1.01	29.53	2.01

NOTE: = ONLY use the "Time=" column to show the length of time that the total inactivation ratio was less than 1.00.

SUBMITTED BY: TOMAS SANCHEZ JR. **Certificate No. and Grade:** WS0012772, B **Date:** April 20, 2019

MONTHLY TOTAL ORGANIC CARBON REMOVAL REPORT (TOCMOR)

FOR SURFACE WATER OR GROUND WATER UNDER THE INFLUENCE OF SURFACE WATER SYSTEMS

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022

Plant ID No.: 20831

Month: March

Year: 2019

Type of treatment: [X] Conventional [ ] Unconventional explain:

Note: Systems are required to run one TOC Sample Set every month. Additional space is provided for those systems that do additional sampling

Test No.	Test Date	Monthly TOC Sample Set			Actual % TOC Removed	Step 1 Required % Removal	Step 1 Removal Ratio	Optional data		INDIVIDUAL SAMPLE COMPLIANCE REMOVAL RATIO
		Raw Alkalinity	Raw TOC	Treated TOC				Step 2 Required % Removal	Step 2 Removal Ratio	
		Enter the Sample Set results			*calculated*	*calculated from matrix*	*calculated*			*calculated*
1	3/11	160	4.33	2.44	43.6	25	1.75			1.75
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
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19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
Avg		160.00	4.33	2.44	43.65		1.75			1.75
Max		160.00	4.33	2.44	43.65		1.75			1.75
Min		160.00	4.33	2.44	43.65		1.75			1.75

TOTAL ORGANIC CARBON (TOC) REMOVAL SUMMARY

TOC Summary					Monthly Compliance Ratio
Raw Water Alkalinity	Raw Water TOC	Treated Water TOC	TOC % Removal	ACC # used	
160	4.33	2.44	43.6	NA	1.75

I certify that I am familiar with the information contained in this report and that, to the best of my knowledge, the information is true, complete, and accurate.

Operator's Signature:

Certificate No. and Grade: WS0012772, B

Date: April 20, 2019

Submit the report by the 10th of the month following the reporting period to:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
WATER SUPPLY DIVISION/PUBLIC DRINKING WATER SECTION (MC-155)
P.O. BOX 13087, AUSTIN, TEXAS 78711-3087

UV MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER

UV Calculated Dose Approach Reactors

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** March **Year:** 2019

VALIDATED OPERATIONAL CONDITIONS

VALIDATED PARAMETERS						PERFORMANCE REQUIREMENTS	
Parameters	Reactor Number					Crypto Log Inactivation	Required UV Dose (mJ/cm^2)
	UVCD1	UVCD2	UVCD3	UVCD4	UVCD5		
Max Validated Flow Rate (MGD)	5.080	5.080	5.080			1.0	2.50
Min Validated UVT (%)	69.20	69.20	69.20				

PERFORMANCE DATA

Date	Reactor	Total Product. (MG)	Max. Flow Rate (MGD)	Min UV Trans. (%)	Minimum Meas'd UV Dose (mJ/cm^2)	Sensor CF	Adjusted Minimum UV Dose (mJ/cm^2)	Total Off-Spec Product. (MG)	Consec. Off-Spec Hours (hr)
1	1	0.411	1.033	90.50	26.86	1.00	26.86	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.388	0.990	90.50	32.11	1.00	32.11	0.000	
	4								
	5								
2	1	0.433	1.500	92.20	18.09	1.00	18.09	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.393	0.960	92.20	34.82	1.00	34.82	0.000	
	4								
	5								
3	1	0.329	0.850	91.80	33.39	1.00	33.39	0.000	0.000
	2	0.405	1.213	91.80	23.84	1.00	23.84	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
4	1	X	X	X	X	X	X	X	0.000
	2	0.328	1.222	87.60	23.84	1.00	23.84	0.000	
	3	0.249	0.783	87.60	34.96	1.00	34.96	0.000	
	4								
	5								
5	1	X	X	X	X	X	X	X	0.25
	2	0.469	0.933	91.40	0.00	1.00	0.00	0.070	
	3	0.314	0.623	91.40	0.00	1.00	0.00	0.040	
	4								
	5								
6	1	X	X	X	X	X	X	X	0.000
	2	0.343	0.902	92.70	32.53	1.00	32.53	0.000	
	3	0.278	0.657	92.70	47.13	1.00	47.13	0.000	
	4								
	5								
7	1	X	X	X	X	X	X	X	0.25
	2	0.396	0.905	90.64	0.00	1.00	0.00	0.007	
	3	0.292	0.608	90.64	0.00	1.00	0.00	0.006	
	4								
	5								
8	1	X	X	X	X	X	X	X	0.000
	2	0.500	1.295	86.30	16.82	1.00	16.82	0.000	
	3	0.344	0.831	86.30	37.42	1.00	37.42	0.000	
	4								
	5								

PERFORMANCE DATA

Date	Reactor	Total Product. (MG)	Max. Flow Rate (MGD)	Min UV Trans. (%)	Minimum Meas'd UV Dose (mJ/cm^2)	Sensor CF	Adjusted Minimum UV Dose (mJ/cm^2)	Total Off-Spec Product. (MG)	Consec. Off-Spec Hours (hr)
9	1	X	X	X	X	X	X	X	0.25
	2	0.420	1.188	87.00	0.00	1.00	0.00	0.012	
	3	0.327	0.763	87.00	0.00	1.00	0.00	0.008	
	4								
	5								
10	1	X	X	X	X	X	X	X	0.000
	2	0.374	1.119	91.60	12.88	1.00	12.88	0.000	
	3	0.283	0.760	91.60	40.76	1.00	40.76	0.000	
	4								
	5								
11	1	0.420	0.959	72.90	28.71	1.00	28.71	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.400	0.917	72.90	33.49	1.00	33.49	0.000	
	4								
	5								
12	1	0.441	1.036	85.10	6.01	1.00	6.01	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.416	0.986	85.10	32.70	1.00	32.70	0.000	
	4								
	5								
13	1	0.440	0.823	89.96	25.30	1.00	25.30	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.412	0.771	89.96	40.66	1.00	40.66	0.000	
	4								
	5								
14	1	0.415	1.116	90.96	2.24	1.00	2.24	0.008	0.25
	2	X	X	X	X	X	X	X	
	3	0.376	1.067	90.96	27.19	1.00	27.19	0.000	
	4								
	5								
15	1	0.322	0.770	89.67	33.15	1.00	33.15	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.315	0.738	89.67	38.49	1.00	38.49	0.000	
	4								
	5								
16	1	0.364	0.941	90.03	0.00	1.00	0.00	0.006	0.25
	2	X	X	X	X	X	X	X	
	3	0.374	0.970	90.03	0.00	1.00	0.00	0.005	
	4								
	5								

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B **Date:** April 20, 2019

UV MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES
OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)
UV Calculated Dose Approach Reactors (cont.)

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 Plant ID No.: 20831 Month: March Year: 2019

TRUE

VALIDATED OPERATIONAL CONDITIONS

VALIDATED PARAMETERS						PERFORMANCE REQUIREMENTS	
Parameters	Reactor Number					Crypto Log Inactivation	Required UV Dose (mJ/cm^2)
	UVCD1	UVCD2	UVCD3	UVCD4	UVCD5		
Max Validated Flow Rate (MGD)	5.080	5.080	5.080			1.0	2.50
Min Validated UVT (%)	69.20	69.20	69.20				

PERFORMANCE DATA

Date	Reactor	Total Product. (MG)	Max. Flow Rate (MGD)	Min UV Trans. (%)	Minimum Meas'd UV Dose (mJ/cm^2)	Sensor CF	Adjusted Minimum UV Dose (mJ/cm^2)	Total Off-Spec Product. (MG)	Consec. Off-Spec Hours (hr)
17	1	0.265	1.224	88.13	0.00	1.00	0.00	0.013	0.25
	2	X	X	X	X	X	X	X	
	3	0.268	1.155	88.13	0.00	1.00	0.00	0.012	
	4								
	5								
18	1	0.431	1.003	92.23	0.00	1.00	0.00	0.008	0.25
	2	X	X	X	X	X	X	X	
	3	0.429	1.002	92.23	0.00	1.00	0.00	0.008	
	4								
	5								
19	1	0.433	0.947	87.91	0.00	1.00	0.00	0.006	0.25
	2	X	X	X	X	X	X	X	
	3	0.389	0.885	87.91	0.00	1.00	0.00	0.005	
	4								
	5								
20	1	0.315	1.114	91.03	0.00	1.00	0.00	0.005	0.25
	2	X	X	X	X	X	X	X	
	3	0.298	1.030	91.03	0.00	1.00	0.00	0.008	
	4								
	5								
21	1	0.341	0.826	90.62	0.00	1.00	0.00	0.005	0.25
	2	X	X	X	X	X	X	X	
	3	0.349	0.762	90.62	0.00	1.00	0.00	0.005	
	4								
	5								
22	1	0.393	0.830	90.96	26.92	1.00	26.92	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.369	0.773	90.96	40.02	1.00	40.02	0.000	
	4								
	5								
23	1	0.315	0.595	89.18	36.07	1.00	36.07	0.000	0.000
	2	0.386	0.803	89.18	17.51	1.00	17.51	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
24	1	0.449	0.960	91.94	32.26	1.00	32.26	0.000	0.000
	2	0.066	0.791	91.94	40.52	1.00	40.52	0.000	
	3	0.364	0.899	91.94	37.24	1.00	37.24	0.000	
	4								
	5								

PERFORMANCE DATA

Date	Reactor	Total Product. (MG)	Max. Flow Rate (MGD)	Min UV Trans. (%)	Minimum Meas'd UV Dose (mJ/cm^2)	Sensor CF	Adjusted Minimum UV Dose (mJ/cm^2)	Total Off-Spec Product. (MG)	Consec. Off-Spec Hours (hr)
25	1	0.420	0.693	90.30	0.00	1.00	0.00	0.002	0.25
	2	X	X	X	X	X	X	X	
	3	0.382	0.654	90.30	0.00	1.00	0.00	0.002	
	4								
	5								
26	1	0.420	0.824	91.91	24.17	1.00	24.17	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.395	0.772	91.91	38.81	1.00	38.81	0.000	
	4								
	5								
27	1	0.442	0.804	89.69	0.00	1.00	0.00	0.003	0.25
	2	X	X	X	X	X	X	X	
	3	0.412	0.753	89.69	0.00	1.00	0.00	0.003	
	4								
	5								
28	1	0.407	0.821	87.83	22.93	1.00	22.93	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.382	0.769	87.83	29.74	1.00	29.74	0.000	
	4								
	5								
29	1	0.417	0.872	73.87	3.13	1.00	3.13	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.392	0.870	73.87	12.91	1.00	12.91	0.000	
	4								
	5								
30	1	0.417	0.805	86.44	5.26	1.00	5.26	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.388	0.752	86.44	31.54	1.00	31.54	0.000	
	4								
	5								
31	1	0.329	1.195	88.00	24.65	1.00	24.65	0.000	
	2	X	X	X	X	X	X	X	
	3	0.303	1.105	88.00	29.49	1.00	29.49	0.000	
	4								
	5								

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B Date: April 20, 2019

UV MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

UV Calculated Dose Approach - Daily Minimum Inactivation Summary Page

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** March **Year:** 2019

DAILY MINIMUM INACTIVATION

Reactor Range	Date	Min Dose (mJ/cm²)	Inactivation Credit Achieved: Giardia Log	Virus Log	Crypto Log	Reactor Range	Date	Min Dose (mJ/cm²)	Min Inactivation: Giardia Log	Virus Log	Crypto Log
1 to 3	1	26.86	4.00	0.14	1.00	1 to 3	9	0.00*	1.00	0.00	1.00
	2	18.09	3.72	0.00	1.00		10	12.88	3.24	0.00	1.00
	3	23.84	4.00	0.04	1.00		11	28.71	4.00	0.19	1.00
	4	23.84	4.00	0.04	1.00		12	6.01	2.16	0.00	1.00
	5	0.00*	1.00	0.00	1.00		13	25.30	4.00	0.09	1.00
	6	32.53	4.00	0.31	1.00		14	2.24*	1.10	0.00	1.00
	7	0.00*	1.00	0.00	1.00		15	33.15	4.00	0.33	1.00
	8	16.82	3.63	0.00	1.00		16	0.00*	1.00	0.00	1.00

DAILY MINIMUM INACTIVATION

Reactor Range	Date	Min Dose (mJ/cm²)	Min Inactivation: Giardia Log	Virus Log	Crypto Log	Reactor Range	Date	Min Dose (mJ/cm²)	Min Inactivation: Giardia Log	Virus Log	Crypto Log
1 to 3	17	0.00*	1.00	0.00	1.00	1 to 3	25	0.00*	1.00	0.00	1.00
	18	0.00*	1.00	0.00	1.00		26	24.17	4.00	0.05	1.00
	19	0.00*	1.00	0.00	1.00		27	0.00*	1.00	0.00	1.00
	20	0.00*	1.00	0.00	1.00		28	22.93	4.00	0.01	1.00
	21	0.00*	1.00	0.00	1.00		29	3.13	1.55	0.00	1.00
	22	26.92	4.00	0.14	1.00		30	5.26	2.01	0.00	1.00
	23	17.51	3.68	0.00	1.00		31	24.65	4.00	0.07	1.00
	24	32.26	4.00	0.30	1.00						

Total volume of water treated by all CDA reactors:	23.34	MG
Total volume of off-spec water produced by all CDA reactors:	0.25	MG
Percentage of off-spec water produced by all CDA reactors:	1.06	%
Crypto Log-Inactivation Credit for treatment by CDA reactors:	1.00	log

Raw water pumpage and total production by all UV reactors differ by more than 15% on these days: 1, 6, 7, 9, 17, 19, 20, 21, 22, 23, 24, 25, 26, 30,

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B **Date:** April 20, 2019

UV MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

UV Sensor Calibration for Calculated Dose Reactors

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831

Month: March **Year:** 2019

CALIBRATION DATA

UV Sensor Calibration Report for Calculated Dose Reactors

CDA Reactor Number	Calibration Date and Data	Duty Sensor	Duty Sensor Serial #	Ref Sensor Serial #	Duty Sensor Reading (mJ/cm²)	Ref Sensor Reading (mJ/cm²)	Cal Ratio	Duty Sensor Replaced?	Calculated Sensor CF
UVCD No. 1	Previous Month's Sensor CF	1	92	44	133.00	124.00	1.07	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	3/1/19	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 2	Previous Month's Sensor CF	1	38	44	149.00	132.00	1.13	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	3/1/19	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 3	Previous Month's Sensor CF	1	39	44	144.00	124.00	1.16	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	3/1/19	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 4	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 5	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							

CALIBRATION DATA

UV Sensor Calibration Report for Calculated Dose Reactors

CDA Reactor Number	Calibration Date	Duty Sensor	Duty Sensor Serial #	Ref Sensor Serial #	Duty Sensor Reading (mJ/cm²)	Ref Sensor Reading (mJ/cm²)	Cal Ratio	Duty Sensor Replaced?	Calculated Sensor CF
UVCD No. 6	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 7	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 8	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 9	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 10	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B

Date: April 20, 2019

UV MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES
OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)
UV Sensor Calibration for Calculated Dose Reactors (cont.)

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 Plant ID No.: 20831

Month: March Year: 2019

CALIBRATION DATA

UV Sensor Calibration Report for Calculated Dose Reactors

CDA Reactor Number	Calibration Date	Duty Sensor	Duty Sensor Serial #	Ref Sensor Serial #	Duty Sensor Reading (mJ/cm²)	Ref Sensor Reading (mJ/cm²)	Cal Ratio	Duty Sensor Replaced?	Calculated Sensor CF
UVCD No. 11	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 12	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 13	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 14	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 15	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							

CALIBRATION DATA

UV Sensor Calibration Report for Calculated Dose Reactors

CDA Reactor Number	Calibration Date	Duty Sensor	Duty Sensor Serial #	Ref Sensor Serial #	Duty Sensor Reading (mJ/cm²)	Ref Sensor Reading (mJ/cm²)	Cal Ratio	Duty Sensor Replaced?	Calculated Sensor CF
UVCD No. 16	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 17	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 18	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 19	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							
UVCD No. 20	Previous Month's Sensor CF	1							
		2							
		3							
		4							
	Calibration Date	5							
		6							
		7							
	New Sensor CF	8							
		9							
		10							

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Date: April 20, 2019

UV MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES
OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)
UVT Analyzer Calibration

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022

Plant ID 20831

NA

Month: March

Year: 2019

CALIBRATION DATA

Benchtop UVT Analyzer Serial Number: P0108955

UVT Analyzer Number	Week	Calibration Date	On-line UVT Analyzer Serial #	On-line Reading (% UVT)	Grab Sample Reading (% UVT)	Difference (% UVT)	Recalibration Performed? (if Diff > 2%)	Other Action Taken
UVT No. 1	1	3/1/19	78713	92.50	93.00	0.50	NA	NA
	2	3/4/19	78713	92.00	92.60	0.60	NA	NA
	3	3/11/19	78713	92.60	93.10	0.50	NA	NA
	4	3/18/19	78713	92.30	91.50	0.80	NA	NA
	5	3/25/19	78713	92.30	91.30	1.00	NA	NA
UVT No. 2	1							
	2							
	3							
	4							
	5							
UVT No. 3	1							
	2							
	3							
	4							
	5							
UVT No. 4	1							
	2							
	3							
	4							
	5							
UVT No. 5	1							
	2							
	3							
	4							
	5							
UVT No. 6	1							
	2							
	3							
	4							
	5							
UVT No. 7	1							
	2							
	3							
	4							
	5							
UVT No. 8	1							
	2							
	3							
	4							
	5							
UVT No. 9	1							
	2							
	3							
	4							
	5							
UVT No. 10	1							
	2							
	3							
	4							
	5							

CALIBRATION DATA

Benchtop UVT Analyzer Serial Number: P0108955

UVT Analyzer Number	Week	Calibration Date	On-line UVT Analyzer Serial #	On-line Reading (% UVT)	Grab Sample Reading (% UVT)	Difference (% UVT)	Recalibration Performed? (if Diff > 2%)	Other Action Taken
UVT No. 11	1							
	2							
	3							
	4							
	5							
UVT No. 12	1							
	2							
	3							
	4							
	5							
UVT No. 13	1							
	2							
	3							
	4							
	5							
UVT No. 14	1							
	2							
	3							
	4							
	5							
UVT No. 15	1							
	2							
	3							
	4							
	5							
UVT No. 16	1							
	2							
	3							
	4							
	5							
UVT No. 17	1							
	2							
	3							
	4							
	5							
UVT No. 18	1							
	2							
	3							
	4							
	5							
UVT No. 19	1							
	2							
	3							
	4							
	5							
UVT No. 20	1							
	2							
	3							
	4							
	5							

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B

Date: April 20, 2019

SURFACE WATER MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES

OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

LT2ESWTR Summary Page

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 Plant ID No.: 20831 Month: March Year: 2019

Note: Indicate the treatment processes in each train. (see comment)	TREATMENT TECHNOLOGIES																
	PRETREATMENT CREDITS				FILTRATION TECHNOLOGY CREDITS						ENHANCED PERFORMANCE CREDITS		DISINFECTION TECHNOLOGY CREDITS			OTHER TREATMENT CREDITS	
	Riverbank Filtration	Presed. with Coagul.	Two-stage Lime Softening	Conventional Sedimentation or Clarification	Conventional Granular Media Filters	Bag or Cartridge Filtration	Two-Stage Filtration	Membrane Filtration (PBT)	Membrane Filtration (QBT)	Membrane Filtration (MBT)	Enhanced CFE Perform.	Optimized IFE Perform.	Crypto Chemical Disinfect.	UV Disinfect. (ISA)	UV Disinfect. (CDA)	Watershed Protection	Perform. Demon.
Overall	FALSE	FALSE	FALSE	TRUE	TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE	FALSE	TRUE	FALSE	FALSE
Train 1				TRUE	TRUE						TRUE	FALSE			TRUE		
Train 2																	
Train 3																	
Train 4																	
Train 5																	
1					2.50										1.00		
2					2.50										1.00		
3					2.50										1.00		
4					2.50										1.00		
5					2.50										1.00		
6					2.50										1.00		
7					2.50										1.00		
8					2.50										1.00		
9					2.50										1.00		
10					2.50										1.00		
11					2.50										1.00		
12					2.50										1.00		
13					2.50										1.00		
14					2.50										1.00		
15					2.50										1.00		
16				0.50	2.50						0.50				1.00		
17					2.50										1.00		
18					2.50										1.00		
19					2.50										1.00		
20					2.50										1.00		
21					2.50										1.00		
22					2.50										1.00		
23					2.50										1.00		
24					2.50										1.00		
25					2.50										1.00		
26					2.50										1.00		
27					2.50										1.00		
28					2.50										1.00		
29					2.50										1.00		
30					2.50										1.00		
31					2.50										1.00		
MIN				0.5	2.5						0.5				1.00		

SURFACE WATER MONTHLY OPERATING REPORT

FOR PUBLIC WATER SYSTEMS THAT ARE USING SURFACE WATER SOURCES
OR GROUND WATER SOURCES UNDER THE INFLUENCE OF SURFACE WATER (cont.)

LT2ESWTR Summary Page (cont)

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 Plant ID No.: 20831 Month: March Year: 2019

	GIARDIA AND CRYPTOSPORIDIUM TREATMENT CREDITS												GIARDIA INACTIVATION CREDITS						VIRAL INACTIVATION CREDITS					
	Total Daily Credit By Train						Total Daily Bin 3 & 4 Credit by Train						Total Daily Inactivation Credit By Train						Total Daily Inactivation Credit by Train					
Overall																								
Train 1	TRUE						TRUE						TRUE						TRUE					
Train 2		FALSE						FALSE						FALSE						FALSE				
Train 3			FALSE						FALSE						FALSE						FALSE			
Train 4				FALSE						FALSE						FALSE						FALSE		
Train 5					FALSE						FALSE						FALSE						FALSE	
						Minimum						Minimum						Minimum						Minimum
1	4.50					4.50	1.00					1.00	5.80					5.80	35.70					35.70
2	4.50					4.50	1.00					1.00	5.52					5.52	50.59					50.59
3	4.50					4.50	1.00					1.00	6.40					6.40	53.14					53.14
4	4.50					4.50	1.00					1.00	7.55					7.55	97.37					97.37
5	4.50					4.50	1.00					1.00	4.87					4.87	103.74					103.74
6	4.50					4.50	1.00					1.00	8.52					8.52	123.67					123.67
7	4.50					4.50	1.00					1.00	4.99					4.99	91.77					91.77
8	4.50					4.50	1.00					1.00	8.25					8.25	109.23					109.23
9	4.50					4.50	1.00					1.00	4.61					4.61	86.50					86.50
10	4.50					4.50	1.00					1.00	8.53					8.53	142.36					142.36
11	4.50					4.50	1.00					1.00	7.45					7.45	76.49					76.49
12	4.50					4.50	1.00					1.00	4.97					4.97	64.47					64.47
13	4.50					4.50	1.00					1.00	6.20					6.20	44.29					44.29
14	4.50					4.50	1.00					1.00	4.80					4.80	86.14					86.14
15	4.50					4.50	1.00					1.00	7.89					7.89	90.90					90.90
16	4.50					4.50	1.00					1.00	4.17					4.17	68.88					68.88
17	4.50					4.50	1.00					1.00	3.49					3.49	52.95					52.95
18	4.50					4.50	1.00					1.00	4.84					4.84	78.21					78.21
19	4.50					4.50	1.00					1.00	3.71					3.71	60.22					60.22
20	4.50					4.50	1.00					1.00	3.84					3.84	65.08					65.08
21	4.50					4.50	1.00					1.00	2.98					2.98	34.69					34.69
22	4.50					4.50	1.00					1.00	6.55					6.55	43.66					43.66
23	4.50					4.50	1.00					1.00	7.04					7.04	65.94					65.94
24	4.50					4.50	1.00					1.00	9.15					9.15	125.28					125.28
25	4.50					4.50	1.00					1.00	6.03					6.03	117.26					117.26
26	4.50					4.50	1.00					1.00	7.25					7.25	63.87					63.87
27	4.50					4.50	1.00					1.00	2.61					2.61	27.24					27.24
28	4.50					4.50	1.00					1.00	6.11					6.11	41.92					41.92
29	4.50					4.50	1.00					1.00	3.65					3.65	43.10					43.10
30	4.50					4.50	1.00					1.00	5.33					5.33	70.74					70.74
31	4.50					4.50	1.00					1.00	8.46					8.46	103.71					103.71
MIN	4.50					4.50	1.00					1.00	2.61					2.61	27.24					27.24
AVG	4.50					4.50	1.00					1.00	5.86					5.86	74.81					74.81
MAX	4.50					4.50	1.00					1.00	9.15					9.15	142.36					142.36