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: April 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: May 10, 2019

TREATMENT PLANT PERFORMANCE

Total number of turbidity readings:	108	Number of 4-hour periods when plant was off-line:	72
Number of readings above 0.10 NTU:	26	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:	0.0	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:	6.59
		Average log inactivation) (including UV) for viruses:	95.67
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:	6.72
		Number of days with pH below 7.0 in the last disinfection zone:	11.00
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 30 required) (8)		
Average disinfectant residual value:	1.81	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:	8.32 NTU	Average turbidity value:	2.22 NTU
	Minimum turbidity reading:	0.14 NTU	Standard deviation:	2.496 NTU
	95th percentile value:	6.80 NTU		
IFE Stastical Summary	Maximum IFE turbidity reading:	0.00 NTU	Average IFE turbidity value:	0.04 NTU
	Minimum IFEturbidity reading:	0.28 NTU	Standard deviation:	0.126 NTU
	95th percentile IFE value:	0.06 NTU		
CFE Stastical Summary	Maximum CFE turbidity reading:	0.22 NTU	Average CFE turbidity value:	0.09 NTU
	Minimum CFE turbidity reading:	0.02 NTU	Standard deviation:	0.035 NTU
	95th percentile CFE value:	0.15 NTU		

STATISTICAL ANALYSIS OF pH DATA

Last Zone pH Stastical Summary	Maximum pH reading:	7.26 pH	Average pH value:	7.03 pH
	Minimum pH reading:	6.72 pH	Standard deviation:	0.132 pH
	95th percentile value:	7.24 pH		

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:** 1,940

Month: April **Year:** 2019 **Population:** 6,790

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	0.909	0.699	15	140	0.2	1.0					X	X	X	0.06	0.03	0.02	0.5	
2	1.018	0.766	17	140	0.2	0.2					X	X	0.02	0.02	0.04	0.06	1.6	
3	0.821	0.654	36	140	0.6	0.2					0.07	X	X	0.08	0.08	0.08	1.6	
4	0.769	0.711	13	140	0.2	0.1					X	X	X	0.08	0.07	0.10	2.2	
5	0.959	0.749	15	140	2.0	0.4					0.11	X	X	0.10	0.10	0.10	0.9	
6	0.905	0.747	16	140	2.9	0.3					X	X	X	0.09	0.13	0.11	2.1	
7	1.077	0.825	20	140	4.4	3.7					0.10	X	X	0.10	0.05	0.07	1.9	
8	0.906	0.980	13	140	0.3	0.2					X	X	X	0.09	0.08	0.09	1.8	
9	0.947	0.928	15	140	0.3	0.3					X	X	X	0.10	0.15	0.11	1.0	
10	0.852	0.962	20	120	0.6	0.8					0.10	X	X	0.20	0.11	0.12	1.5	
11	0.957	0.937	19	120	6.8	0.9					0.13	X	X	0.15	0.22	0.15	1.3	
12	0.956	0.861	19	120	6.0	6.6					0.14	X	X	0.19	0.13	0.11	1.7	
13	0.853	0.871	23	120	0.5	4.6					X	X	X	0.07	0.04	0.09	1.6	
14	0.877	0.931	23	120	3.4	7.0					X	X	X	0.12	0.10	0.11	1.5	
15	0.957	0.890	40	100	5.2	0.2					X	X	X	0.09	0.10	0.10	1.5	
16	0.958	0.860	39	100	8.2	1.4					0.10	X	X	0.10	0.10	0.11	1.6	
17	0.936	0.915	17	120	6.4	1.5					0.11	X	X	0.11	0.12	0.12	1.3	
18	0.901	0.827	15	120	8.3	0.5					0.11	X	X	0.09	0.09	0.09	1.7	
19	0.867	0.962	19	140	6.3	0.3					X	X	X	0.08	0.10	0.08	1.5	
20	1.052	1.011	19	140	3.9	0.9					0.06	X	X	0.03	0.02	0.02	1.9	
21	0.968	0.969	28	120	0.7	0.3					X	X	X	0.03	0.10	0.08	1.6	
22	1.189	1.106	44	140	1.8	0.2					0.07	X	X	0.07	0.08	0.09	2.1	
23	0.938	0.915	59	120	0.5	4.7					0.07	X	X	0.08	0.08	0.10	1.9	
24	0.897	0.878	78	120	0.7	6.5					0.10	X	X	0.10	0.10	0.11	1.8	
25	0.951	0.938	14	140	0.4	1.9					X	X	X	0.13	0.07	0.07	2.4	
26	1.074	0.960	10	120	0.5	3.6					0.06	X	X	0.07	0.08	0.08	2.4	
27	1.016	0.988	31	120	0.5	4.7					0.08	X	X	0.05	0.10	0.09	1.4	
28	1.059	0.934	19	120	6.2	0.2					0.08	X	X	0.07	0.06	0.08	1.8	
29	1.097	0.928	13	140	0.8	0.3					X	X	0.08	0.08	0.02	0.07	1.6	
30	0.827	0.914	15	140	0.5	0.4					X	X	X	0.08	0.07	0.06	1.3	
31																		
Total	28.493	26.616		Max	8.3	7.0												
Avg	0.950	0.887		Avg	2.6	1.8												
Max	1.189	1.106		95th %	7.6	6.6												
Min	0.769	0.654		Min	0.2	0.1												
				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:** May 10, 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:** April **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	0.07		0.20		0.08		0.10													
2	0.04		0.16		0.06		0.25													
3	0.04		0.06		0.05		0.07													
4	0.07		0.10		0.10		0.10													
5	0.10		0.16		0.14		0.15													
6	0.13		0.23		0.10		0.13													
7	0.12		0.12		0.14		0.15													
8	0.06		0.16		0.06		0.10													
9	0.08		0.26		0.22		0.18													
10	0.04		0.27		0.18		0.15													
11	0.20		0.27		0.17		0.17													
12	0.18		0.18		0.21		0.27													
13	0.07		0.13		0.13		0.12													
14	0.24		0.12		0.18		0.18													
15	0.17		0.12		0.18		0.14													
16	0.18		0.11		0.12		0.24													
17	0.16		0.15		0.16		0.12													
18	0.11		0.06		0.15		0.17													
19	0.14		0.14		0.10		0.14													
20	0.04		0.05		0.06		0.13													
21	0.12		0.08		0.10		0.16													
22	0.18		0.06		0.08		0.09													
23	0.12		0.10		0.08		0.10													
24	0.11		0.06		0.11		0.22													
25	0.09		0.05		0.15		0.28													
26	0.15		0.06		0.08		0.09													
27	0.12		0.07		0.11		0.16													
28	0.12		0.08		0.08		0.10													
29	0.08		0.07		0.04		0.15													
30	0.07		0.06		0.08		0.06													
31																				

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:** May 10, 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:** April **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

DISINFECTION PROCESS DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time*
17	FCL *D1A*	0.5	0.779	22.7	7.1	3.64	78.39	7.28 (G)	
	FCL *D1B*	0.6	0.779	23.3	7.0				
	FCL *D2*	1.1	0.389	23.1	7.0				
	CLA *D3*	2.5	0.779	23.8	7.0				
	D4								
18	FCL *D1A*	0.5	0.725	23.5	7.0	3.96	82.24	7.92 (G)	
	FCL *D1B*	0.9	0.725	23.3	6.9				
	FCL *D2*	1.0	0.362	23.3	7.0				
	CLA *D3*	2.6	0.725	23.9	6.9				
	D4								
19	FCL *D1A*	1.4	0.712	23.2	7.1	3.98	89.40	7.96 (G)	
	FCL *D1B*	2.0	0.712	23.1	6.9				
	FCL *D2*	0.8	0.356	23.3	7.1				
	CLA *D3*	2.3	0.712	24.2	6.9				
	D4								
20	FCL *D1A*	1.7	0.716	22.4	7.0	6.26	153.18	12.53 (G)	
	FCL *D1B*	2.1	0.716	22.2	7.0				
	FCL *D2*	1.7	0.358	22.7	7.0				
	CLA *D3*	2.7	0.716	23.9	7.0				
	D4								
21	FCL *D1A*	1.1	0.730	25.6	7.1	5.55	136.63	11.10 (G)	
	FCL *D1B*	2.0	0.730	24.2	7.0				
	FCL *D2*	1.6	0.365	22.9	7.1				
	CLA *D3*	2.7	0.730	22.8	7.1				
	D4								
22	FCL *D1A*	1.4	0.742	2.7	7.0	3.98	98.01	7.95 (G)	
	FCL *D1B*	2.3	0.742	22.7	7.0				
	FCL *D2*	1.5	0.371	22.3	7.1				
	CLA *D3*	2.2	0.742	21.6	7.1				
	D4								
23	FCL *D1A*	1.1	0.741	23.2	7.2	5.80	149.17	11.60 (G)	
	FCL *D1B*	1.8	0.741	23.7	7.3				
	FCL *D2*	1.8	0.370	23.4	7.2				
	CLA *D3*	3.0	0.741	23.3	7.1				
	D4								
24	FCL *D1A*	0.5	0.767	22.0	7.1	3.10	69.20	6.20 (G)	
	FCL *D1B*	0.4	0.767	23.0	7.1				
	FCL *D2*	1.0	0.383	22.0	7.1				
	CLA *D3*	2.2	0.767	22.0	7.0				
	D4								

PERFORMANCE DATA

DISINFECTION PROCESS DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time*
25	FCL *D1A*	0.1	0.755	22.1	7.2	1.68	39.88	3.37 (G)	
	FCL *D1B*	0.3	0.755	21.9	7.2				
	FCL *D2*	0.7	0.377	21.2	7.4				
	CLA *D3*	1.3	0.755	22.1	7.3				
	D4								
26	FCL *D1A*	0.7	0.739	21.7	7.2	3.33	74.60	6.66 (G)	
	FCL *D1B*	0.7	0.739	22.1	7.1				
	FCL *D2*	1.0	0.369	20.6	7.3				
	CLA *D3*	2.9	0.739	22.9	7.2				
	D4								
27	FCL *D1A*	0.3	0.732	23.5	7.2	2.50	47.78	5.00 (G)	
	FCL *D1B*	0.3	0.732	24.4	7.2				
	FCL *D2*	0.6	0.366	23.3	7.3				
	CLA *D3*	2.4	0.732	24.8	7.1				
	D4								
28	FCL *D1A*	1.6	0.738	23.9	7.4	3.36	75.15	6.72 (G)	
	FCL *D1B*	1.8	0.738	24.7	7.3				
	FCL *D2*	0.5	0.369	23.8	7.3				
	CLA *D3*	2.8	0.738	25.9	7.2				
	D4								
29	FCL *D1A*	0.7	0.757	24.4	7.2	3.76	84.26	7.52 (G)	
	FCL *D1B*	0.8	0.757	24.2	7.1				
	FCL *D2*	0.9	0.378	24.0	7.3				
	CLA *D3*	2.6	0.757	24.7	7.1				
	D4								
30	FCL *D1A*	0.6	0.761	25.1	7.1	4.01	84.92	8.02 (G)	
	FCL *D1B*	0.7	0.761	25.2	6.9				
	FCL *D2*	1.0	0.380	24.6	7.1				
	CLA *D3*	2.7	0.761	24.7	7.0				
	D4								
31	*D1A*								
	D1B								
	D2								
	D3								
	D4								
					Max	7.16	208.38	14.32	
					Min	1.68	31.45	3.37	
					Avg	4.09	95.62	8.19	
					SD	1.46	43.41	2.92	

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:** May 10, 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:** April **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

DISINFECTION PROCESS DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time*
1	FCL *D1A*	1.2	0.754	21.3	7.2	4.02	86.15	8.05 (G)	
	FCL *D1B*	1.4	0.754	20.7	7.1				
	FCL *D2*	1.0	0.377	21.4	7.2				
	CLA *D3*	4.3	0.754	21.1	7.1				
	D4								
2	FCL *D1A*	0.9	0.737	21.1	7.3	3.74	85.05	7.48 (G)	
	FCL *D1B*	1.1	0.737	21.1	7.2				
	FCL *D2*	1.2	0.368	19.8	7.3				
	CLA *D3*	3.9	0.737	20.9	7.3				
	D4								
3	FCL *D1A*	1.6	0.714	21.7	7.1	6.07	147.01	12.15 (G)	
	FCL *D1B*	1.2	0.714	21.4	7.1				
	FCL *D2*	1.9	0.357	21.8	7.1				
	CLA *D3*	4.4	0.714	21.8	7.0				
	D4								
4	FCL *D1A*	2.9	0.730	19.9	7.1	7.16	208.38	14.32 (G)	
	FCL *D1B*	3.0	0.730	20.3	7.0				
	FCL *D2*	2.7	0.365	20.5	7.2				
	CLA *D3*	3.4	0.730	21.3	7.1				
	D4								
5	FCL *D1A*	1.6	0.753	20.9	7.1	4.15	110.43	8.30 (G)	
	FCL *D1B*	1.4	0.753	21.1	7.1				
	FCL *D2*	1.5	0.376	20.8	7.2				
	CLA *D3*	1.5	0.753	21.0	7.0				
	D4								
6	FCL *D1A*	0.9	0.756	22.1	7.0	3.67	86.23	7.34 (G)	
	FCL *D1B*	1.0	0.756	21.1	7.0				
	FCL *D2*	1.1	0.378	21.9	7.1				
	CLA *D3*	2.2	0.786	22.3	7.1				
	D4								
7	FCL *D1A*	1.1	0.766	20.8	7.0	2.48	53.46	4.96 (G)	
	FCL *D1B*	1.0	0.766	20.9	7.1				
	FCL *D2*	0.6	0.383	21.3	7.3				
	CLA *D3*	2.3	0.766	21.5	7.2				
	D4								
8	FCL *D1A*	0.4	0.788	23.0	7.0	1.91	35.01	3.83 (G)	
	FCL *D1B*	0.4	0.788	23.2	7.0				
	FCL *D2*	0.4	0.394	23.0	7.1				
	CLA *D3*	2.3	0.788	22.0	7.2				
	D4								

PERFORMANCE DATA

DISINFECTION PROCESS DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time*
9	FCL *D1A*	0.3	0.790	22.0	6.8	1.85	32.15	3.70 (G)	
	FCL *D1B*	0.3	0.790	22.0	6.7				
	FCL *D2*	0.4	0.395	22.0	6.9				
	CLA *D3*	2.0	0.790	23.0	6.9				
	D4								
10	FCL *D1A*	0.2	0.746	22.8	6.9	1.94	31.45	3.88 (G)	
	FCL *D1B*	0.3	0.746	23.1	6.9				
	FCL *D2*	0.4	0.373	23.1	7.0				
	CLA *D3*	2.4	0.746	23.5	7.0				
	D4								
11	FCL *D1A*	0.9	0.730	23.0	7.0	3.51	72.77	7.01 (G)	
	FCL *D1B*	1.4	0.730	23.0	7.0				
	FCL *D2*	0.8	0.365	22.7	6.9				
	CLA *D3*	2.2	0.730	23.5	7.0				
	D4								
12	FCL *D1A*	0.9	0.734	23.0	7.0	4.46	98.73	8.92 (G)	
	FCL *D1B*	1.4	0.734	23.0	7.0				
	FCL *D2*	1.1	0.367	23.0	7.0				
	CLA *D3*	2.6	0.734	22.2	6.9				
	D4								
13	FCL *D1A*	0.6	0.753	22.8	6.7	5.08	105.69	10.15 (G)	
	FCL *D1B*	1.2	0.753	21.2	6.6				
	FCL *D2*	1.5	0.376	21.7	6.7				
	CLA *D3*	2.8	0.753	23.0	6.7				
	D4								
14	FCL *D1A*	3.8	0.745	22.8	6.9	6.05	143.78	12.10 (G)	
	FCL *D1B*	2.1	0.745	22.8	6.9				
	FCL *D2*	1.5	0.372	22.3	6.9				
	CLA *D3*	2.6	0.745	22.8	6.8				
	D4								
15	FCL *D1A*	2.2	0.771	22.1	7.0	6.64	182.52	13.27 (G)	
	FCL *D1B*	2.1	0.771	22.3	7.0				
	FCL *D2*	2.4	0.385	21.5	7.2				
	CLA *D3*	3.2	0.771	22.7	6.9				
	D4								
16	FCL *D1A*	1.1	0.774	22.8	7.0	5.16	126.98	10.33 (G)	
	FCL *D1B*	1.7	0.774	23.5	6.9				
	FCL *D2*	1.6	0.387	23.1	7.0				
	CLA *D3*	2.3	0.774	23.2	7.0				
	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:** May 10, 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: April

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	4/8	140	5.76	2.77	51.9	25	2.08			2.08
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
Avg		140.00	5.76	2.77	51.91		2.08			2.08
Max		140.00	5.76	2.77	51.91		2.08			2.08
Min		140.00	5.76	2.77	51.91		2.08			2.08

TOTAL ORGANIC CARBON (TOC) REMOVAL SUMMARY

TOC Summary					Monthly Compliance Ratio
Raw Water Alkalinity	Raw Water TOC	Treated Water TOC	TOC % Removal	ACC # used	
140	5.76	2.77	51.9	NA	2.08

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: May 10, 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

ın
Crypto Log
1.00
1.00
1.00
1.00
1.00
1.00
1.00

UVMOR

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:** April **Year:** 2019

DAILY MINIMUM INACTIVATION

Reactor Range	SUMMARY DATA					Reactor Range	SUMMARY DATA				
	Date	Min Dose (mJ/cm²)	Inactivation Credit Achieved: Giardia Log	Virus Log	Crypto Log		Date	Min Dose (mJ/cm²)	Min Inactivation: Giardia Log	Virus Log	Crypto Log
1 to 3	1	2.59	1.30	0.00	1.00	1 to 3	9	27.68	4.00	0.16	1.00
	2	19.03	3.79	0.00	1.00		10	23.58	4.00	0.03	1.00
	3	25.83	4.00	0.10	1.00		11	0.00*	1.00	0.00	1.00
	4	15.88	3.56	0.00	1.00		12	0.00*	1.00	0.00	1.00
	5	0.00*	1.00	0.00	1.00		13	2.65	1.34	0.00	1.00
	6	31.69	4.00	0.29	1.00		14	0.00*	1.00	0.00	1.00
	7	0.00*	1.00	0.00	1.00		15	0.00*	1.00	0.00	1.00
	8	4.99	1.97	0.00	1.00		16	6.02	2.16	0.00	1.00

DAILY MINIMUM INACTIVATION

Reactor Range	SUMMARY DATA					Reactor Range	SUMMARY DATA			
	Date	Min Dose (mJ/cm²)	Min Inactivation: Giardia Log	Virus Log	Crypto Log		Date	Min Dose (mJ/cm²)	Min Inactivatic: Giardia Log	Virus Log
1 to 3	17	0.00*	1.00	0.00	1.00	1 to 3	25	28.67	4.00	0.19
	18	1.83*	1.00	0.00	1.00		26	24.37	4.00	0.06
	19	0.00*	1.00	0.00	1.00		27	12.92	3.24	0.00
	20	23.35	4.00	0.02	1.00		28	33.34	4.00	0.34
	21	15.70	3.55	0.00	1.00		29	27.08	4.00	0.14
	22	0.00*	1.00	0.00	1.00		30	23.38	4.00	0.02
	23	9.97	2.84	0.00	1.00		31			
	24	0.00*	1.00	0.00	1.00					

Total volume of water treated by all CDA reactors:	23.37	MG
Total volume of off-spec water produced by all CDA reactors:	0.19	MG
Percentage of off-spec water produced by all CDA reactors:	0.80	%
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: (April, 2019) 2, 3, 5, 7, 11, 22, 23, 24, 25, 26, 27, 29,

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B **Date:** May 10, 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: April Year: 2019

TRUE

VALIDATED OPERATIONAL CONDITIONS

VALIDATED PARAMETERS						PERFORMANCE REQUIREMENTS	
Parameters	Reactor Number UVCD1	UVCD2	UVCD3	UVCD4	UVCD5	Crypto Log Inactivation	Required UV Dose (mJ/cm²)
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/cm²)	Sensor CF	Adjusted Minimum UV Dose (mJ/cm²)	Total Off-Spec Product. (MG)	Consec. Off-Spec Hours (hr)
17	1	0.446	0.990	84.70	0.00	1.00	0.00	0.010	0.25
	2	X	X	X	X	X	X	X	
	3	0.404	0.801	84.70	29.20	1.00	29.20	0.000	
	4								
	5								
18	1	0.418	1.035	85.00	1.83	1.00	1.83	0.007	0.25
	2	X	X	X	X	X	X	X	
	3	0.397	0.973	85.00	25.60	1.00	25.60	0.000	
	4								
	5								
19	1	0.421	0.856	84.70	0.00	1.00	0.00	0.009	0.25
	2	X	X	X	X	X	X	X	
	3	0.387	0.797	84.70	23.85	1.00	23.85	0.000	
	4								
	5								
20	1	0.470	0.818	87.10	23.35	1.00	23.35	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.450	0.772	87.10	27.11	1.00	27.11	0.000	
	4								
	5								
21	1	0.375	0.897	89.80	15.70	1.00	15.70	0.000	0.000
	2	0.476	1.252	89.80	18.14	1.00	18.14	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
22	1	0.508	1.053	85.60	0.00	1.00	0.00	0.011	0.25
	2	0.052	0.862	85.60	29.90	1.00	29.90	0.000	
	3	0.434	1.000	85.60	0.00	1.00	0.00	0.010	
	4								
	5								
23	1	0.336	0.763	86.10	9.97	1.00	9.97	0.000	0.000
	2	0.454	0.911	86.10	15.48	1.00	15.48	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
24	1	0.097	1.183	85.00	0.00	1.00	0.00	0.028	0.25
	2	X	X	X	X	X	X	X	
	3	0.089	0.790	85.00	0.00	1.00	0.00	0.012	
	4								
	5								

PERFORMANCE DATA

Date	Reactor	Total Product. (MG)	Max. Flow Rate (MGD)	Min UV Trans. (%)	Minimum Meas'd UV Dose (mJ/cm²)	Sensor CF	Adjusted Minimum UV Dose (mJ/cm²)	Total Off-Spec Product. (MG)	Consec. Off-Spec Hours (hr)
25	1	0.301	0.672	85.50	28.67	1.00	28.67	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	X	X	X	X	X	X	X	
	4								
	5								
26	1	0.284	0.640	88.00	24.37	1.00	24.37	0.000	0.000
	2	0.256	0.852	88.00	32.05	1.00	32.05	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
27	1	0.395	0.666	88.00	12.92	1.00	12.92	0.000	0.000
	2	0.424	0.895	88.00	29.30	1.00	29.30	0.000	
	3	0.005	0.254	88.00	101.68	1.00	101.68	0.000	
	4								
	5								
28	1	0.438	0.658	90.20	39.06	1.00	39.06	0.000	0.000
	2	0.518	0.848	90.20	33.34	1.00	33.34	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
29	1	0.416	0.726	87.30	32.60	1.00	32.60	0.000	0.000
	2	0.507	0.892	87.30	27.08	1.00	27.08	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
30	1	0.343	0.699	91.30	36.94	1.00	36.94	0.000	0.000
	2	0.431	0.870	91.30	23.38	1.00	23.38	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
31	1								
	2								
	3								
	4								
	5								

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B Date: May 10, 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

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:** April **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	0.403	1.157	86.40	2.59	1.00	2.59	0.000	0.000
	2	0.007	0.725	86.40	49.62	1.00	49.62	0.000	
	3	0.363	0.859	86.40	34.16	1.00	34.16	0.000	
	4								
	5								
2	1	0.431	0.683	88.50	19.03	1.00	19.03	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.391	0.642	88.40	38.76	1.00	38.76	0.000	
	4								
	5								
3	1	0.353	1.055	90.10	25.83	1.00	25.83	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.329	0.696	90.10	39.00	1.00	39.00	0.000	
	4								
	5								
4	1	0.381	0.947	88.00	15.88	1.00	15.88	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.345	0.883	88.00	28.80	1.00	28.80	0.000	
	4								
	5								
5	1	0.391	1.199	75.60	0.00	1.00	0.00	0.009	0.25
	2	X	X	X	X	X	X	X	
	3	0.348	0.701	75.60	37.63	1.00	37.63	0.000	
	4								
	5								
6	1	0.407	0.790	89.60	31.69	1.00	31.69	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.365	0.737	89.60	39.49	1.00	39.49	0.000	
	4								
	5								
7	1	0.442	0.962	77.30	0.00	1.00	0.00	0.010	0.25
	2	X	X	X	X	X	X	X	
	3	0.402	0.918	77.30	32.01	1.00	32.01	0.000	
	4								
	5								
8	1	0.476	0.929	88.00	4.99	1.00	4.99	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.430	0.872	88.00	35.69	1.00	35.69	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	0.455	0.919	86.80	27.68	1.00	27.68	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.409	0.914	86.80	32.33	1.00	32.33	0.000	
	4								
	5								
10	1	0.402	1.008	84.70	23.58	1.00	23.58	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.386	0.966	84.70	27.17	1.00	27.17	0.000	
	4								
	5								
11	1	0.420	1.500	84.30	0.00	1.00	0.00	0.016	0.25
	2	X	X	X	X	X	X	X	
	3	0.379	0.967	84.30	24.01	1.00	24.01	0.000	
	4								
	5								
12	1	0.421	0.788	82.80	18.86	1.00	18.86	0.000	0.25
	2	X	X	X	X	X	X	X	
	3	0.402	0.737	82.80	0.00	1.00	0.00	0.005	
	4								
	5								
13	1	0.415	1.048	84.00	2.65	1.00	2.65	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.403	0.960	84.00	27.07	1.00	27.07	0.000	
	4								
	5								
14	1	0.347	0.706	82.60	0.00	1.00	0.00	0.005	0.25
	2	0.461	0.972	82.60	0.00	1.00	0.00	0.007	
	3	X	X	X	X	X	X	X	
	4								
	5								
15	1	0.375	0.695	84.30	0.00	1.00	0.00	0.012	0.25
	2	0.470	0.982	84.30	0.00	1.00	0.00	0.037	
	3	X	X	X	X	X	X	X	
	4								
	5								
16	1	0.361	1.058	84.90	6.02	1.00	6.02	0.000	0.000
	2	0.468	0.994	84.90	18.18	1.00	18.18	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B **Date:** May 10, 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: April **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							

SUBMITTED BY: Tomas Sanchez JR.

Certificate No. and Grade: WS0012772, B

Date: May 10, 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: April **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	74.30	65.70	1.13	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	4/1/19	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 2	Previous Month's Sensor CF	1	38	44	121.00	105.00	1.15	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	4/1/19	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 3	Previous Month's Sensor CF	1	39	44	76.50	74.90	1.02	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	4/1/19	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: May 10, 2019

Other Action Taken

10, 2019

UVMOR

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: April

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	4/1/19	78713	91.50	90.80	0.70	NA	NA
	2	4/8/19	78713	91.50	91.50	0.00	NA	NA
	3	4/15/19	78713	89.00	90.50	1.50	NA	NA
	4	4/22/19	78713	92.20	92.00	0.20	NA	NA
	5	4/29/19	78713	92.30	92.10	0.20	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%)
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: May

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: April 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	FALSE	FALSE	FALSE	FALSE	Minimum	TRUE	FALSE	FALSE	FALSE	FALSE	Minimum	TRUE	FALSE	FALSE	FALSE	FALSE	Minimum	TRUE	FALSE	FALSE	FALSE	FALSE	Minimum
Train 2																								
Train 3																								
Train 4																								
Train 5																								
1	4.50					4.50	1.00					1.00	5.33					5.33	86.15					86.15
2	4.50					4.50	1.00					1.00	7.81					7.81	85.05					85.05
3	4.50					4.50	1.00					1.00	10.07					10.07	147.11					147.11
4	4.50					4.50	1.00					1.00	10.73					10.73	208.38					208.38
5	4.50					4.50	1.00					1.00	5.15					5.15	110.43					110.43
6	4.50					4.50	1.00					1.00	7.67					7.67	86.52					86.52
7	4.50					4.50	1.00					1.00	3.48					3.48	53.46					53.46
8	4.50					4.50	1.00					1.00	3.88					3.88	35.01					35.01
9	4.50					4.50	1.00					1.00	5.85					5.85	32.31					32.31
10	4.50					4.50	1.00					1.00	5.94					5.94	31.48					31.48
11	4.50					4.50	1.00					1.00	4.51					4.51	72.77					72.77
12	4.50					4.50	1.00					1.00	5.46					5.46	98.73					98.73
13	4.50					4.50	1.00					1.00	6.41					6.41	105.69					105.69
14	4.50					4.50	1.00					1.00	7.05					7.05	143.78					143.78
15	4.50					4.50	1.00					1.00	7.64					7.64	182.52					182.52
16	4.50					4.50	1.00					1.00	7.33					7.33	126.98					126.98
17	4.50					4.50	1.00					1.00	4.64					4.64	78.39					78.39
18	4.50					4.50	1.00					1.00	4.96					4.96	82.24					82.24
19	4.50					4.50	1.00					1.00	4.98					4.98	89.40					89.40
20	4.50					4.50	1.00					1.00	10.26					10.26	153.20					153.20
21	4.50					4.50	1.00					1.00	9.10					9.10	136.63					136.63
22	4.50					4.50	1.00					1.00	4.98					4.98	98.01					98.01
23	4.50					4.50	1.00					1.00	8.65					8.65	149.17					149.17
24	4.50					4.50	1.00					1.00	4.10					4.10	69.20					69.20
25	4.50					4.50	1.00					1.00	5.68					5.68	40.08					40.08
26	4.50					4.50	1.00					1.00	7.33					7.33	74.66					74.66
27	4.50					4.50	1.00					1.00	5.74					5.74	47.78					47.78
28	4.50					4.50	1.00					1.00	7.36					7.36	75.48					75.48
29	4.50					4.50	1.00					1.00	7.76					7.76	84.40					84.40
30	4.50					4.50	1.00					1.00	8.01					8.01	84.94					84.94
31																								
MIN	4.50					4.50	1.00					1.00	3.48					3.48	31.48					31.48
AVG	4.50					4.50	1.00					1.00	6.59					6.59	95.67					95.67
MAX	4.50					4.50	1.00					1.00	10.73					10.73	208.38					208.38

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: April 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																	
MIN				0.5	2.5						0.5				1.00		