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: May 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: WS0012618, C

Date: June 10, 2019

TREATMENT PLANT PERFORMANCE

Total number of turbidity readings:	100	Number of 4-hour periods when plant was off-line:	86
Number of readings above 0.10 NTU:	7	Number of 4-hour periods when plant was on-line	
Number of readings above 0.3 NTU:	0	but turbidity data was not collected:	0
Number of readings above 0.5 NTU:	0	Number of days when plant was on-line	
Number of readings above 1.0 NTU:	0	but individual filter turbidity data was not collected:	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:	7.02
		Average log inactivation) (including UV) for viruses:	96.42
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:	13.00
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:	47 (at least 31 required) (8)		
Average disinfectant residual value:	1.50	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 P.7-TOC ACC

Alternate Technol. UV–CDA UV–Sensor Data UV–UVT Analyzer

STATISTICAL ANALYSIS OF TURBIDITY DATA

Settled Water Stastical Summary	Maximum turbidity reading:	10.90 NTU	Average turbidity value:	2.25 NTU
	Minimum turbidity reading:	0.06 NTU	Standard deviation:	2.135 NTU
	95th percentile value:	5.16 NTU		
IFE Stastical Summary	Maximum IFE turbidity reading:	0.00 NTU	Average IFE turbidity value:	0.02 NTU
	Minimum IFEturbidity reading:	0.18 NTU	Standard deviation:	0.075 NTU
	95th percentile IFE value:	0.03 NTU		
CFE Stastical Summary	Maximum CFE turbidity reading:	0.21 NTU	Average CFE turbidity value:	0.08 NTU
	Minimum CFE turbidity reading:	0.02 NTU	Standard deviation:	0.027 NTU
	95th percentile CFE value:	0.11 NTU		

STATISTICAL ANALYSIS OF pH DATA

Last Zone pH Stastical Summary	Maximum pH reading:	7.70 pH	Average pH value:	7.00 pH
	Minimum pH reading:	6.70 pH	Standard deviation:	0.178 pH
	95th percentile value:	7.16 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:** 1,941

Month: May **Year:** 2019 **Population:** 6,794

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	0.922	0.957	34	140	0.1	0.6					X	X	X	0.05	0.06	0.10	1.4	
2	0.954	0.894	39	140	0.3	0.3					0.09	X	X	X	0.10	0.08	1.3	
3	1.144	0.709	51	140	0.3	0.3					0.10	X	X	0.07	0.08	0.07	1.0	
4	0.931	0.753	76	140	0.3	0.3					X	X	X	0.07	0.08	0.09	1.0	
5	0.785	0.757	46	140	7.3	1.0					X	X	X	0.09	0.08	0.08	0.7	
6	0.722	0.722	16	120	1.7	1.1					X	X	x	0.08	0.07	0.07	0.7	
7	0.836	0.721	18	120	0.3	0.3					X	X	X	0.07	0.09	0.09	2.4	
8	0.884	0.597	18	120	0.3	1.2					0.08	X	X	0.09	0.09	0.10	1.4	
9	0.798	0.734	21	140	0.3	2.9					X	X	X	X	0.12	0.11	2.2	
10	0.754	0.707	34	140	0.3	1.7					X	X	X	X	0.11	0.10	1.4	
11	0.735	0.738	54	140	0.3	0.8					X	X	X	X	0.09	0.09	1.2	
12	0.717	0.779	68	140	0.2	1.2					X	X	X	X	0.08	0.07	1.2	
13	0.862	0.823	12	120	0.1	0.9					X	X	X	0.10	0.05	0.08	1.1	
14	0.844	0.807	15	120	1.0	4.3					X	X	X	0.08	0.09	0.09	2.5	
15	0.893	0.854	16	140	5.1	5.1					X	X	X	0.10	0.10	0.09	1.5	
16	0.927	0.089	23	140	6.8	1.5					X	X	0.10	0.10	0.09	0.09	2.4	
17	0.993	0.738	16	140	1.3	1.2					X	X	X	0.09	0.05	0.05	2.6	
18	0.992	0.915	23	120	3.3	1.1					0.04	X	X	X	0.05	0.05	1.8	
19	1.120	0.923	41	120	1.3	1.0					X	X	X	0.04	0.03	0.02	1.4	
20	1.080	0.954	36	140	4.7	5.1					X	X	X	0.06	0.09	0.05	1.0	
21	0.982	0.852	15	140	4.4	4.8					0.05	X	X	0.07	0.08	0.09	0.7	
22	0.876	0.989	16	120	4.2	0.5					X	X	X	0.09	0.09	0.10	1.7	
23	1.160	0.957	24	120	3.6	0.8					0.10	X	X	0.11	0.11	0.11	0.9	
24	0.939	0.965	12	140	2.8	0.9					X	X	X	0.06	0.06	0.05	0.9	
25	1.020	0.957	29	140	2.7	1.1					0.07	X	X	0.04	0.03	0.03	0.6	
26	0.996	0.944	28	120	2.9	1.3					X	X	0.03	0.02	0.02	0.02	1.5	
27	0.986	1.054	14	120	3.2	10.9					0.08	X	X	0.21	0.05	0.08	1.4	
28	1.200	1.020	14	140	3.3	5.2					0.08	X	X	0.09	0.08	0.09	0.8	
29	0.986	0.994	27	120	3.1	3.8					0.09	X	X	0.09	0.09	0.09	1.8	
30	0.838	0.975	28	120	3.1	3.7					X	X	X	0.08	0.08	0.09	1.1	
31	1.190	1.030	38	140	3.0	3.6					0.09	X	X	0.06	0.05	0.10	2.1	
Total	29.066	25.908		Max	7.3	10.9												
Avg	0.938	0.836		Avg	2.3	2.2												
Max	1.200	1.054		95th %	6.0	5.1												
Min	0.717	0.089		Min	0.1	0.3												
				95th percentile based on data from all basins						5.2								

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: Adolfo Vasquez **Certificate No. and Grade:** WS0012618, C **Date:** June 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:** May **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	0.06		0.06		0.08		0.03													
2	0.08		0.06		0.12		0.05													
3	0.09		0.04		0.09		0.04													
4	0.12		0.05		0.12		0.07													
5	0.13		0.08		0.09		0.06													
6	0.10		0.08		0.07		0.05													
7	0.06		0.06		0.08		0.04													
8	0.06		0.06		0.08		0.07													
9	0.07		0.06		0.09		0.03													
10	0.07		0.07		0.08		0.02													
11	0.05		0.05		0.07		0.02													
12	0.05		0.05		0.06		0.02													
13	0.09		0.07		0.10		0.04													
14	0.10		0.09		0.09		0.03													
15	0.08		0.07		0.10		0.03													
16	0.08		0.10		0.11		0.06													
17	0.09		0.06		0.14		0.08													
18	0.08		0.06		0.10		0.08													
19	0.10		0.11		0.11		0.11													
20	0.05		0.12		0.18		0.03													
21	0.05		0.07		0.10		0.04													
22	0.06		0.09		0.09		0.03													
23	0.07		0.05		0.10		0.06													
24	0.08		0.07		0.09		0.06													
25	0.07		0.06		0.08		0.04													
26	0.08		0.08		0.10		0.02													
27	0.16		0.08		0.15		0.18													
28	0.07		0.06		0.06		0.05													
29	0.05		0.05		0.11		0.04													
30	0.07		0.12		0.14		0.05													
31	0.06		0.06		0.11		0.04													

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: Adolio Vasquez **Certificate No. and Grade:** WS0012618, C **Date:** June 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:** May **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	DISINFECTION PROCESS DATA								
	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time
1	FCL *D1A*	0.6	0.750	24.7	7.0	2.79	52.59	5.58 (G)	
	FCL *D1B*	0.4	0.750	24.2	7.0				
	FCL *D2*	0.6	0.375	24.7	7.1				
	CLA *D3*	2.4	0.750	25.4	7.0				
	D4								
2	FCL *D1A*	0.4	0.750	24.9	7.0	2.80	53.15	5.61 (G)	
	FCL *D1B*	0.6	0.750	24.7	7.0				
	FCL *D2*	0.6	0.375	24.7	7.1				
	CLA *D3*	2.4	0.750	25.4	7.0				
	D4								
3	FCL *D1A*	0.5	0.742	25.0	7.0	3.06	63.55	6.12 (G)	
	FCL *D1B*	0.6	0.742	24.9	7.0				
	FCL *D2*	0.7	0.371	24.4	7.2				
	CLA *D3*	2.3	0.742	24.3	7.2				
	D4								
4	FCL *D1A*	0.8	0.732	25.1	7.1	3.39	78.76	6.79 (G)	
	FCL *D1B*	1.1	0.732	25.1	7.0				
	FCL *D2*	0.8	0.366	24.6	7.2				
	CLA *D3*	1.5	0.732	24.9	7.0				
	D4								
5	FCL *D1A*	0.5	0.718	23.8	7.1	2.90	61.60	5.79 (G)	
	FCL *D1B*	0.6	0.718	24.0	7.1				
	FCL *D2*	0.7	0.359	24.3	7.1				
	CLA *D3*	1.5	0.718	25.2	7.2				
	D4								
6	FCL *D1A*	0.3	0.668	25.3	7.1	1.13	19.49	2.26 (G)	
	FCL *D1B*	0.8	0.668	25.9	6.9				
	FCL *D2*	0.1	0.334	25.4	7.1				
	CLA *D3*	1.1	0.668	24.6	7.0				
	D4								
7	FCL *D1A*	0.5	0.721	25.3	7.0	3.01	57.12	6.03 (G)	
	FCL *D1B*	0.9	0.721	25.4	6.9				
	FCL *D2*	0.5	0.360	25.2	7.1				
	CLA *D3*	2.4	0.721	25.3	7.1				
	D4								
8	FCL *D1A*	0.7	0.735	25.5	7.0	3.76	76.68	7.52 (G)	
	FCL *D1B*	0.8	0.735	25.4	6.9				
	FCL *D2*	0.7	0.367	25.3	7.0				
	CLA *D3*	2.4	0.735	25.7	7.0				
	D4								

PERFORMANCE DATA

Date	DISINFECTION PROCESS DATA								
	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time
9	FCL *D1A*	0.2	0.760	24.2	7.1	1.87	30.30	3.74 (G)	
	FCL *D1B*	0.1	0.760	24.5	6.9				
	FCL *D2*	0.4	0.380	24.1	7.1				
	CLA *D3*	2.3	0.760	24.6	7.1				
	D4								
10	FCL *D1A*	1.8	0.756	24.0	6.9	4.83	110.10	9.67 (G)	
	FCL *D1B*	1.6	0.756	24.0	7.0				
	FCL *D2*	1.0	0.378	24.0	6.9				
	CLA *D3*	2.0	0.756	25.0	6.9				
	D4								
11	FCL *D1A*	2.0	0.774	24.0	6.9	5.53	132.95	11.05 (G)	
	FCL *D1B*	1.6	0.774	24.0	7.0				
	FCL *D2*	1.4	0.387	24.0	7.0				
	CLA *D3*	2.4	0.774	24.0	6.9				
	D4								
12	FCL *D1A*	1.5	0.761	24.0	6.9	5.23	114.22	10.47 (G)	
	FCL *D1B*	1.6	0.761	24.0	7.0				
	FCL *D2*	1.1	0.380	24.0	6.9				
	CLA *D3*	2.9	0.761	24.0	7.0				
	D4								
13	FCL *D1A*	1.0	0.782	24.0	7.1	2.59	48.36	5.18 (G)	
	FCL *D1B*	0.8	0.782	24.1	7.1				
	FCL *D2*	0.4	0.391	23.9	7.1				
	CLA *D3*	2.5	0.782	24.7	7.0				
	D4								
14	FCL *D1A*	0.7	0.734	24.1	7.0	2.38	45.34	4.76 (G)	
	FCL *D1B*	0.9	0.734	24.6	7.0				
	FCL *D2*	0.4	0.367	24.1	7.7				
	CLA *D3*	2.7	0.734	24.3	7.7				
	D4								
15	FCL *D1A*	0.1	0.768	23.7	7.1	1.42	17.00	2.83 (G)	
	FCL *D1B*	0.3	0.768	23.7	6.9				
	FCL *D2*	0.2	0.384	23.2	7.3				
	CLA *D3*	2.9	0.768	23.9	7.1				
	D4								
16	FCL *D1A*	0.0	0.780	23.5	7.0	1.03	8.05	2.06 (G)	
	FCL *D1B*	0.0	0.780	22.6	7.0				
	FCL *D2*	0.1	0.390	22.9	7.1				
	CLA *D3*	2.8	0.780	23.5	7.1				
	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: Adolfo Vasquez **Certificate No. and Grade:** WS0012618, C **Date:** June 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:** May **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*	0.3	0.786	26.4	7.1	1.95	24.54	3.90 (G)	
	FCL *D1B*	0.1	0.786	26.4	6.9				
	FCL *D2*	0.3	0.393	24.9	7.0				
	CLA *D3*	3.4	0.786	26.3	7.0				
	D4								
18	FCL *D1A*	0.1	0.780	23.7	7.1	1.70	17.98	3.39 (G)	
	FCL *D1B*	0.3	0.780	24.0	7.1				
	FCL *D2*	0.2	0.390	24.1	7.1				
	CLA *D3*	3.4	0.780	25.5	7.0				
	D4								
19	FCL *D1A*	0.5	0.771	25.4	6.9	1.78	24.70	3.55 (G)	
	FCL *D1B*	0.6	0.771	25.3	6.9				
	FCL *D2*	0.1	0.396	24.6	7.1				
	CLA *D3*	2.9	0.771	24.1	6.9				
	D4								
20	FCL *D1A*	0.3	0.748	26.5	6.8	3.12	56.14	6.25 (G)	
	FCL *D1B*	0.5	0.748	26.8	6.7				
	FCL *D2*	0.6	0.374	26.0	7.0				
	CLA *D3*	2.9	0.748	26.8	6.8				
	D4								
21	FCL *D1A*	1.1	0.738	28.4	6.9	6.17	135.05	12.35 (G)	
	FCL *D1B*	1.3	0.738	28.4	6.9				
	FCL *D2*	1.1	0.369	26.4	7.0				
	CLA *D3*	3.3	0.738	26.9	6.8				
	D4								
22	FCL *D1A*	1.5	0.655	28.0	6.8	10.13	244.06	20.26 (G)	
	FCL *D1B*	1.3	0.655	27.0	6.9				
	FCL *D2*	1.9	0.328	27.6	6.9				
	CLA *D3*	3.2	0.655	27.9	6.8				
	D4								
23	FCL *D1A*	1.5	0.709	28.0	6.9	8.76	227.71	17.51 (G)	
	FCL *D1B*	1.9	0.709	28.0	7.0				
	FCL *D2*	1.8	0.355	28.0	7.1				
	CLA *D3*	2.5	0.709	28.0	6.7				
	D4								
24	FCL *D1A*	1.4	0.714	28.0	6.9	8.86	213.63	17.72 (G)	
	FCL *D1B*	1.6	0.714	28.0	7.0				
	FCL *D2*	1.7	0.357	28.0	6.9				
	CLA *D3*	2.8	0.714	28.0	6.8				
	D4								

PERFORMANCE DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time
25	FCL *D1A*	1.3	0.724	27.0	7.1	7.75	203.51	15.50 (G)	
	FCL *D1B*	1.6	0.724	27.0	7.0				
	FCL *D2*	1.7	0.362	28.0	7.1				
	CLA *D3*	2.2	0.724	28.0	6.8				
	D4								
26	FCL *D1A*	1.4	0.738	27.0	7.0	7.83	192.39	15.66 (G)	
	FCL *D1B*	1.6	0.738	27.0	7.1				
	FCL *D2*	1.7	0.369	27.0	6.9				
	CLA *D3*	2.3	0.738	27.0	6.8				
	D4								
27	FCL *D1A*	1.1	0.758	27.4	7.2	7.03	185.06	14.05 (G)	
	FCL *D1B*	1.3	0.758	27.4	7.1				
	FCL *D2*	1.7	0.379	27.4	7.1				
	CLA *D3*	2.4	0.758	28.2	7.1				
	D4								
28	FCL *D1A*	1.3	0.747	26.8	7.1	6.42	162.14	12.83 (G)	
	FCL *D1B*	1.6	0.747	27.0	7.0				
	FCL *D2*	1.5	0.374	26.6	7.1				
	CLA *D3*	2.4	0.747	27.2	7.1				
	D4								
29	FCL *D1A*	1.1	0.708	27.9	7.0	7.36	177.21	14.72 (G)	
	FCL *D1B*	1.4	0.708	28.3	7.0				
	FCL *D2*	1.4	0.354	28.1	7.1				
	CLA *D3*	2.8	0.708	28.3	7.0				
	D4								
30	FCL *D1A*	1.5	0.692	27.4	7.1	3.43	75.64	6.86 (G)	
	FCL *D1B*	1.8	0.692	27.3	7.2				
	FCL *D2*	0.2	0.346	26.9	7.2				
	CLA *D3*	2.3	0.692	27.9	7.0				
	D4								
31	FCL *D1A*	0.5	0.707	26.4	7.0	3.97	77.29	7.93 (G)	
	FCL *D1B*	0.7	0.707	26.5	7.0				
	FCL *D2*	0.7	0.354	26.2	7.1				
	CLA *D3*	3.1	0.707	27.3	7.1				
	D4								

	Giardia Log	Virus Log	Inact. Ratio
Max	10.13	244.06	20.26
Min	1.03	8.05	2.06
Avg	4.32	96.33	8.64
SD	2.54	70.03	5.08

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

SUBMITTED BY: Adolfo Vasquez **Certificate No. and Grade:** WS0012618, C **Date:** June 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: May

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: Raw Alkalinity	Raw TOC	Treated TOC	Actual % TOC Removed	Step 1 Required % Removal	Step 1 Removal Ratio	Optional data: Step 2 Required % Removal	Step 2 Removal Ratio	INDIVIDUAL SAMPLE COMPLIANCE REMOVAL RATIO
		Enter the Sample Set results			calculated	calculated from matrix	calculated			calculated
1	5/8	120	3.63	2.74	24.5	25	0.98			0.98
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		120.00	3.63	2.74	24.52		0.98			0.98
Max		120.00	3.63	2.74	24.52		0.98			0.98
Min		120.00	3.63	2.74	24.52		0.98			0.98

TOTAL ORGANIC CARBON (TOC) REMOVAL SUMMARY

TOC Summary					Monthly Compliance Ratio
Raw Water Alkalinity	Raw Water TOC	Treated Water TOC	TOC % Removal	ACC # used	
120	3.63	2.74	24.5	NA	0.98

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: [signature]

Certificate No. and Grade: WS0012618, C

Date: June 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

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: May Year: 2019

VALIDATED OPERATIONAL CONDITIONS

VALIDATED PARAMETERS						PERFORMANCE REQUIREMENTS	
	Reactor Number					Crypto Log	Required UV Dose
Parameters	UVCD1	UVCD2	UVCD3	UVCD4	UVCD5	Inactivation	(mJ/cm^2)
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

	OPERATIONAL 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	0.334	0.739	85.20	32.05	1.00	32.05	0.000	0.25
	2	0.412	0.989	85.20	23.41	1.00	23.41	0.000	
	3	0.004	0.260	85.20	0.00	1.00	0.00	0.003	
	4								
	5								
2	1	0.447	0.796	82.05	0.00	1.00	0.00	0.004	0.25
	2	0.124	0.871	82.05	26.36	1.00	26.36	0.000	
	3	0.306	0.717	82.05	0.00	1.00	0.00	0.002	
	4								
	5								
3	1	0.549	1.036	87.25	0.00	1.00	0.00	0.008	0.25
	2	X	X	X	X	X	X	X	
	3	0.485	0.937	87.25	0.00	1.00	0.00	0.007	
	4								
	5								
4	1	0.441	0.795	86.76	6.60	1.00	6.60	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.395	0.703	86.76	39.46	1.00	39.46	0.000	
	4								
	5								
5	1	0.384	0.778	86.56	36.97	1.00	36.97	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.341	0.692	86.56	43.81	1.00	43.81	0.000	
	4								
	5								
6	1	0.336	0.755	88.25	32.00	1.00	32.00	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.317	0.708	88.25	37.64	1.00	37.64	0.000	
	4								
	5								
7	1	0.385	0.744	91.74	0.00	1.00	0.00	0.004	0.25
	2	X	X	X	X	X	X	X	
	3	0.351	0.699	91.74	0.00	1.00	0.00	0.004	
	4								
	5								
8	1	0.338	0.745	88.13	16.16	1.00	16.16	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.366	0.709	88.13	40.66	1.00	40.66	0.000	
	4								
	5								

PERFORMANCE DATA

	OPERATIONAL 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	0.378	0.859	87.44	0.00	1.00	0.00	0.012	0.25
	2	X	X	X	X	X	X	X	
	3	0.355	0.806	87.44	0.00	1.00	0.00	0.012	
	4								
	5								
10	1	0.355	0.838	87.25	31.21	1.00	31.21	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.337	0.799	87.25	35.95	1.00	35.95	0.000	
	4								
	5								
11	1	0.349	0.821	85.05	26.61	1.00	26.61	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.332	0.771	85.05	30.50	1.00	30.50	0.000	
	4								
	5								
12	1	0.348	0.814	86.39	34.24	1.00	34.24	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.330	0.778	86.39	39.39	1.00	39.39	0.000	
	4								
	5								
13	1	0.403	0.839	90.47	9.42	1.00	9.42	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.382	0.786	90.47	37.16	1.00	37.16	0.000	
	4								
	5								
14	1	0.386	0.761	86.21	0.00	1.00	0.00	0.006	0.25
	2	X	X	X	X	X	X	X	
	3	0.365	0.722	86.21	41.40	1.00	41.40	0.000	
	4								
	5								
15	1	0.408	0.791	90.18	22.69	1.00	22.69	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.384	0.736	90.18	22.69	1.00	22.69	0.000	
	4								
	5								
16	1	0.426	0.821	91.06	0.00	1.00	0.00	0.015	0.25
	2	X	X	X	X	X	X	X	
	3	0.402	0.777	91.06	36.78	1.00	36.78	0.000	
	4								
	5								

SUBMITTED BY: Adolfo Vasquez
Certificate No. and Grade: WS0012618, C
Date: June 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: May Year: 2019
TRUE

VALIDATED OPERATIONAL CONDITIONS

VALIDATED PARAMETERS						PERFORMANCE REQUIREMENTS	
	Reactor Number						
Parameters	UVCD1	UVCD2	UVCD3	UVCD4	UVCD5	Crypto Log Inactivation	Required UV Dose (mJ/cm^2)
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)
		OPERATIONAL DATA							
17	1	0.420	1.020	88.66	25.31	1.00	25.31	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.384	0.952	88.66	28.90	1.00	28.90	0.000	
	4								
	5								
18	1	0.443	0.860	86.64	24.61	1.00	24.61	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.407	0.812	86.64	31.63	1.00	31.63	0.000	
	4								
	5								
19	1	0.491	0.756	89.13	0.00	1.00	0.00	0.007	0.25
	2	X	X	X	X	X	X		
	3	0.453	0.717	89.13	0.00	1.00	0.00	0.007	
	4								
	5								
20	1	0.421	0.713	86.88	31.38	1.00	31.38	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.387	0.670	86.88	36.62	1.00	36.62	0.000	
	4								
	5								
21	1	0.431	0.707	84.98	0.00	1.00	0.00	0.007	0.25
	2	X	X	X	X	X	X	X	
	3	0.402	0.672	87.37	0.00	1.00	0.00	0.007	
	4								
	5								
22	1	0.393	0.655	87.37	0.00	1.00	0.00	0.004	0.25
	2	X	X	X	X	X	X	X	
	3	0.361	0.611	87.37	0.00	1.00	0.00	0.004	
	4								
	5								
23	1	0.541	0.725	88.71	32.09	1.00	32.09	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.513	0.681	88.71	37.44	1.00	37.44	0.000	
	4								
	5								
24	1	0.477	0.791	88.22	10.32	1.00	10.32	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.435	0.741	88.22	32.48	1.00	32.48	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)
		OPERATIONAL DATA							
25	1	0.484	1.140	87.74	22.64	1.00	22.64	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.452	0.985	87.74	26.37	1.00	26.37	0.000	
	4								
	5								
26	1	0.490	0.855	86.95	18.55	1.00	18.55	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.465	0.831	86.95	30.89	1.00	30.89	0.000	
	4								
	5								
27	1	0.467	0.800	86.00	2.73	1.00	2.73	0.000	0.000
	2	X	X	X	X	X	X		
	3	0.427	0.770	86.00	33.19	1.00	33.19	0.000	
	4								
	5								
28	1	0.577	0.787	87.08	28.81	1.00	28.81	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.532	0.739	87.08	32.57	1.00	32.57	0.000	
	4								
	5								
29	1	0.489	0.810	88.03	0.00	1.00	0.00	0.005	0.25
	2	X	X	X	X	X	X	X	
	3	0.457	0.757	88.03	0.00	1.00	0.00	0.004	
	4								
	5								
30	1	0.466	0.844	86.15	24.62	1.00	24.62	0.000	0.000
	2	X	X	X	X	X	X	X	
	3	0.428	0.827	86.15	26.24	1.00	26.24	0.000	
	4								
	5								
31	1	X	X	X	X	X	X	X	
	2	0.525	0.848	86.54	30.97	1.00	30.97	0.000	
	3	0.050	0.682	86.54	31.09	1.00	31.09	0.000	
	4								
	5								

SUBMITTED BY: Adolfo Vasquez
Certificate No. and Grade: WS0012618, C
Date: June 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 - 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:** May **Year:** 2019

DAILY MINIMUM INACTIVATION

Reactor Range	Date	Min Dose (mJ/cm²)	Min 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	0.00*	1.00	0.00	1.00	1 to 3	9	0.00*	1.00	0.00	1.00
	2	0.00*	1.00	0.00	1.00		10	31.21	4.00	0.27	1.00
	3	0.00*	1.00	0.00	1.00		11	26.61	4.00	0.13	1.00
	4	6.60	2.28	0.00	1.00		12	34.24	4.00	0.36	1.00
	5	36.97	4.00	0.44	1.00		13	9.42	2.76	0.00	1.00
	6	32.00	4.00	0.30	1.00		14	0.00*	1.00	0.00	1.00
	7	0.00*	1.00	0.00	1.00		15	22.69	4.00	0.00	1.00
	8	16.16	3.58	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	25.31	4.00	0.09	1.00	1 to 3	25	22.64	4.00	0.00	1.00
	18	24.61	4.00	0.06	1.00		26	18.55	3.75	0.00	1.00
	19	0.00*	1.00	0.00	1.00		27	2.73	1.38	0.00	1.00
	20	31.38	4.00	0.28	1.00		28	28.81	4.00	0.20	1.00
	21	0.00*	1.00	0.00	1.00		29	0.00*	1.00	0.00	1.00
	22	0.00*	1.00	0.00	1.00		30	24.62	4.00	0.06	1.00
	23	32.09	4.00	0.30	1.00		31	30.97	4.00	0.26	1.00
	24	10.32	2.90	0.00	1.00						

Total volume of water treated by all CDA reactors:	25.52	MG
Total volume of off-spec water produced by all CDA reactors:	0.12	MG
Percentage of off-spec water produced by all CDA reactors:	0.48	%
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, 8, 17, 19, 20, 21, 31

SUBMITTED BY: Adolfo Vasquez

Certificate No. and Grade: WS0012618, C **Date:** June 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:** May **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	71.20	69.90	1.02	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	5/1/19	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 2	Previous Month's Sensor CF	1	38	44	78.10	75.70	1.03	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	5/1/19	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 3	Previous Month's Sensor CF	1	39	44	103.10	93.40	1.10	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	5/1/19	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: Adolfo Vasquez

Certificate No. and Grade: WS0012618, C

Date: June 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:** May **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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Certificate No. and Grade: WS0012618, C

Date: June 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.)
UVT Analyzer Calibration

PUBLIC WATER SYSTEM NAME: Webb County Water Utilities

PLANT NAME OR NUMBER: Rio Bravo

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

NA

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	5/1/19	78713	92.20	92.00	0.20	NA	NA
	2	5/6/19	78713	92.30	92.10	0.20	NA	NA
	3	5/13/19	78713	91.10	91.50	0.40	NA	NA
	4	5/20/19	78713	89.00	92.20	3.20	NO	Manual Sample
	5	5/28/19	78713	88.10	92.00	3.90	NO	Manual Sample
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: Adolfo Vasquez

Certificate No. and Grade: WS0012618, C

Date: June 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.)

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:** May **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:** May **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	3.79					3.79	52.59					52.59
2	4.50					4.50	1.00					1.00	3.79					3.79	53.15					53.15
3	4.50					4.50	1.00					1.00	4.06					4.06	63.55					63.55
4	4.50					4.50	1.00					1.00	5.67					5.67	78.76					78.76
5	4.50					4.50	1.00					1.00	6.90					6.90	62.04					62.04
6	4.50					4.50	1.00					1.00	5.13					5.13	19.79					19.79
7	4.50					4.50	1.00					1.00	4.01					4.01	57.12					57.12
8	4.50					4.50	1.00					1.00	7.34					7.34	76.68					76.68
9	4.50					4.50	1.00					1.00	2.87					2.87	30.30					30.30
10	4.50					4.50	1.00					1.00	8.83					8.83	110.37					110.37
11	4.50					4.50	1.00					1.00	9.53					9.53	133.08					133.08
12	4.50					4.50	1.00					1.00	9.23					9.23	114.58					114.58
13	4.50					4.50	1.00					1.00	5.35					5.35	48.36					48.36
14	4.50					4.50	1.00					1.00	3.38					3.38	45.34					45.34
15	4.50					4.50	1.00					1.00	5.42					5.42	17.00					17.00
16	4.50					4.50	1.00					1.00	2.03					2.03	8.05					8.05
17	4.50					4.50	1.00					1.00	5.95					5.95	24.63					24.63
18	4.50					4.50	1.00					1.00	5.70					5.70	18.04					18.04
19	4.50					4.50	1.00					1.00	2.78					2.78	24.70					24.70
20	4.50					4.50	1.00					1.00	7.12					7.12	56.42					56.42
21	4.50					4.50	1.00					1.00	7.17					7.17	135.05					135.05
22	4.50					4.50	1.00					1.00	11.13					11.13	244.06					244.06
23	4.50					4.50	1.00					1.00	12.76					12.76	228.01					228.01
24	4.50					4.50	1.00					1.00	11.76					11.76	213.63					213.63
25	4.50					4.50	1.00					1.00	11.75					11.75	203.51					203.51
26	4.50					4.50	1.00					1.00	11.58					11.58	192.39					192.39
27	4.50					4.50	1.00					1.00	8.40					8.40	185.06					185.06
28	4.50					4.50	1.00					1.00	10.42					10.42	162.34					162.34
29	4.50					4.50	1.00					1.00	8.36					8.36	177.21					177.21
30	4.50					4.50	1.00					1.00	7.43					7.43	75.70					75.70
31	4.50					4.50	1.00					1.00	7.97					7.97	77.55					77.55
MIN	4.50					4.50	1.00					1.00	2.03					2.03	8.05					8.05
AVG	4.50					4.50	1.00					1.00	7.02					7.02	96.42					96.42
MAX	4.50					4.50	1.00					1.00	12.76					12.76	244.06					244.06