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 Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022

Plant ID No.: 20831

Report for the Month of: September 2018

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: October 10, 2018

TREATMENT PLANT PERFORMANCE

Total number of turbidity readings:	99	Number of 4-hour periods when plant was off-line:	81
Number of readings above 0.10 NTU:	9	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:	6.99
		Average log inactivation) (including UV) for viruses:	129.10
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:	6.60
		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:	40 (at least 30 required) (8)		
Average disinfectant residual value:	2.11	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:	8.40 NTU	Average turbidity value:	2.47 NTU
	Minimum turbidity reading:	0.36 NTU	Standard deviation:	1.448 NTU
	95th percentile value:	5.14 NTU		
IFE Stastical Summary	Maximum IFE turbidity reading:	0.00 NTU	Average IFE turbidity value:	0.05 NTU
	Minimum IFEturbidity reading:	0.24 NTU	Standard deviation:	0.093 NTU
	95th percentile IFE value:	0.04 NTU		
CFE Stastical Summary	Maximum CFE turbidity reading:	0.18 NTU	Average CFE turbidity value:	0.09 NTU
	Minimum CFE turbidity reading:	0.04 NTU	Standard deviation:	0.018 NTU
	95th percentile CFE value:	0.11 NTU		

STATISTICAL ANALYSIS OF pH DATA

Last Zone pH Stastical Summary	Maximum pH reading:	7.59 pH	Average pH value:	7.09 pH
	Minimum pH reading:	6.60 pH	Standard deviation:	0.222 pH
	95th percentile value:	7.46 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 Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Connections:** 1,942

Month: September **Year:** 2018 **Population:** 6,797

PERFORMANCE DATA

Date	Raw Water Pumpage (MGD)	Treated Water Pumpage (MGD)	RAW WATER ANALYSES		SETTLED WATER TURBIDITY (Optional Data) Basin No.						FINISHED WATER QUALITY Combined Filter Effluent Turbidity						Lowest Residual	Time*
			NTU	Alk.	1	2	3	4	5	6	NTU1	NTU2	NTU3	NTU4	NTU5	NTU6		
1	1.178	0.751	12	120	2.8	2.6					0.05	X	0.07	0.06	0.08	0.07	1.1	
2	1.049	0.612	9	120	3.4	3.5					0.07	X	0.09	0.07	0.08	0.09	0.9	
3	1.006	0.638	7	120	3.3	0.9					X	X	0.07	0.07	0.08	X	0.8	
4	1.116	0.612	8	120	5.1	1.3					0.09	X	X	0.10	0.10	0.10	0.6	
5	0.997	0.657	18	120	0.6	3.5					X	X	X	0.10	0.10	0.12	0.9	
6	0.851	0.685	18	120	1.9	2.0					X	X	0.11	0.10	0.10	0.10	0.8	
7	0.992	0.565	9	120	3.4	2.4					0.11	X	X	0.08	0.08	0.08	1.7	
8	0.930	0.580	12	120	2.9	2.7					X	X	0.07	0.08	0.07	0.07	2.0	
9	0.775	0.509	16	120	3.1	5.3					X	X	X	0.06	0.06	0.06	1.6	
10	0.643	0.562	17	120	3.0	2.6					X	X	0.08	0.11	0.10	X	1.9	
11	0.942	0.521	24	120	3.1	2.9					0.11	X	X	X	0.08	0.08	1.9	
12	0.766	0.587	19	120	3.5	2.9					0.08	X	X	0.08	0.08	0.08	1.8	
13	1.059	0.561	21	120	5.9	1.7					0.08	X	X	0.08	0.08	0.07	2.0	
14	1.009	0.579	28	120	5.1	1.1					X	X	0.10	0.06	0.07	0.04	1.9	
15	0.917	0.528	50	120	8.4	1.2					0.09	X	X	X	0.09	0.09	1.3	
16	0.819	0.568	65	120	0.4	1.7					0.09	X	X	X	0.10	0.10	1.8	
17	0.829	0.547	60	120	3.0	1.9					X	X	X	0.18	0.10	0.10	1.9	
18	0.834	0.571	24	120	2.8	2.3					X	X	X	0.09	0.09	0.09	2.0	
19	0.911	0.535	34	120	1.7	1.4					X	X	X	0.10	0.10	0.10	1.9	
20	0.830	0.494	39	120	1.2	1.6					X	X	X	0.10	0.10	0.10	1.8	
21	0.966	0.539	39	120	0.9	1.5					X	X	0.09	0.07	0.09	0.08	1.7	
22	0.767	0.468	31	120	0.5	2.1					X	X	X	0.07	0.07	0.08	1.2	
23	0.784	0.540	33	120	0.4	1.5					X	X	X	X	0.07	0.08	1.2	
24	0.822	0.555	31	140	2.4	2.6					X	X	X	0.10	0.10	0.10	1.7	
25	0.729	0.486	41	140	2.0	1.4					X	X	X	X	0.12	0.11	1.6	
26	0.866	0.617	69	140	2.6	1.5					X	X	X	0.10	0.11	0.10	2.2	
27	0.732	0.514	69	140	2.0	1.1					X	X	X	0.10	0.10	0.10	1.7	
28	0.730	0.516	79	140	3.2	1.3					X	X	X	0.10	0.08	0.08	2.0	
29	0.745	0.503	44	140	3.2	1.8					X	X	X	0.09	0.08	0.08	1.3	
30	0.755	0.566	44	140	5.1	1.7					X	X	X	0.10	0.08	X	1.6	
31																		
Total	26.349	16.966		Max	8.4	5.3												
Avg	0.878	0.566		Avg	2.9	2.1												
Max	1.178	0.751		95th %	5.5	3.5												
Min	0.643	0.468		Min	0.4	0.9												
				95th percentile based on data from all basins						5.1								

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:** October 10, 2018

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 Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** September **Year:** 2018

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		0.12		0.11		0.08													
2	0.08		0.17		0.09		0.07													
3	0.07		0.11		0.09		0.07													
4	0.07		0.11		0.09		0.06													
5	0.07		0.08		0.09		0.24													
6	0.08		0.10		0.09		0.06													
7	0.05		0.08		0.11		0.05													
8	0.05		0.14		0.11		0.05													
9	0.05		0.08		0.11		0.05													
10	0.07		0.08		0.09		0.07													
11	0.06		0.08		0.10		0.07													
12	0.07		0.08		0.10		0.05													
13	0.06		0.08		0.12		0.11													
14	0.06		0.10		0.12		0.18													
15	0.07		0.13		0.12		0.07													
16	0.07		0.15		0.11		0.08													
17	0.08		0.19		0.18		0.08													
18	0.08		0.10		0.09		0.09													
19	0.08		0.07		0.10		0.06													
20	0.08		0.07		0.17		0.06													
21	0.08		0.24		0.16		0.08													
22	0.08		0.06		0.10		0.07													
23	0.06		0.06		0.08		0.06													
24	0.07		0.09		0.10		0.14													
25	0.08		0.09		0.10		0.08													
26	0.08		0.09		0.10		0.07													
27	0.06		0.12		0.11		0.10													
28	0.06		0.08		0.11		0.06													
29	0.08		0.16		0.12		0.08													
30	0.10		0.09		0.21		0.07													
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:** October 10, 2018

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 Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** September **Year:** 2018

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*	1.6	0.781	28.4	7.1				
	FCL *D1B*	1.6	0.781	28.6	6.9				
	FCL *D2*	1.8	0.390	28.1	7.0	8.40	217.15	16.80	
	CLA *D3*	2.7	0.781	28.9	6.9			(G)	
	D4								
2	FCL *D1A*	1.7	0.781	29.0	7.3				
	FCL *D1B*	1.6	0.781	28.6	7.1				
	FCL *D2*	1.8	0.390	26.8	7.2	7.47	201.22	14.93	
	CLA *D3*	2.6	0.781	29.0	6.8			(G)	
	D4								
3	FCL *D1A*	1.8	0.819	28.0	6.9				
	FCL *D1B*	1.9	0.819	29.0	7.0				
	FCL *D2*	1.7	0.409	28.0	7.0	7.48	197.51	14.95	
	CLA *D3*	1.3	0.819	28.0	6.8			(G)	
	D4								
4	FCL *D1A*	1.2	0.807	27.0	7.0				
	FCL *D1B*	1.1	0.807	27.0	6.4				
	FCL *D2*	1.3	0.403	27.0	6.8	6.00	135.65	11.99	
	CLA *D3*	1.9	0.807	27.0	6.6			(G)	
	D4								
5	FCL *D1A*	1.4	0.771	29.0	7.0				
	FCL *D1B*	1.6	0.771	29.0	7.1				
	FCL *D2*	1.1	0.385	29.0	6.9	6.37	154.29	12.73	
	CLA *D3*	1.4	0.771	28.0	6.7			(G)	
	D4								
6	FCL *D1A*	1.0	0.735	26.0	7.3				
	FCL *D1B*	1.1	0.735	26.8	7.2				
	FCL *D2*	1.1	0.367	27.9	7.1	5.90	133.09	11.79	
	CLA *D3*	3.3	0.735	28.0	6.9			(G)	
	D4								
7	FCL *D1A*	0.5	0.729	29.2	7.2				
	FCL *D1B*	0.4	0.729	29.3	7.2				
	FCL *D2*	0.8	0.364	27.0	7.2	4.02	89.65	8.05	
	CLA *D3*	2.3	0.729	29.3	7.0			(G)	
	D4								
8	FCL *D1A*	0.8	0.712	28.0	7.2				
	FCL *D1B*	0.8	0.712	27.9	7.2				
	FCL *D2*	1.2	0.356	26.6	7.1	5.83	132.13	11.66	
	CLA *D3*	3.1	0.712	28.2	7.0			(G)	
	D4								

PERFORMANCE DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time
9	FCL *D1A*	1.0	0.693	27.2	7.2				
	FCL *D1B*	0.8	0.693	27.1	7.2				
	FCL *D2*	1.0	0.346	28.3	7.1	5.81	132.56	11.61	
	CLA *D3*	2.8	0.693	27.9	6.9			(G)	
	D4								
10	FCL *D1A*	1.2	0.680	24.4	7.4				
	FCL *D1B*	1.0	0.680	24.0	7.3				
	FCL *D2*	1.4	0.340	23.3	7.2	5.23	127.40	10.46	
	CLA *D3*	2.5	0.680	24.8	7.2			(G)	
	D4								
11	FCL *D1A*	1.4	0.648	26.9	7.2				
	FCL *D1B*	1.5	0.648	26.1	7.2				
	FCL *D2*	1.8	0.324	25.0	7.1	8.34	206.82	16.69	
	CLA *D3*	3.6	0.648	25.7	7.0			(G)	
	D4								
12	FCL *D1A*	1.4	0.649	25.6	7.3				
	FCL *D1B*	1.7	0.649	25.7	7.3				
	FCL *D2*	1.7	0.324	25.8	7.1	8.06	197.48	16.13	
	CLA *D3*	3.8	0.649	25.9	7.0			(G)	
	D4								
13	FCL *D1A*	0.5	0.746	25.2	7.3				
	FCL *D1B*	0.5	0.746	24.5	7.2				
	FCL *D2*	0.2	0.373	23.8	7.0	2.34	29.10	4.67	
	CLA *D3*	4.0	0.746	25.5	6.9			(G)	
	D4								
14	FCL *D1A*	0.9	0.774	24.6	7.4				
	FCL *D1B*	1.2	0.774	25.2	7.4				
	FCL *D2*	1.6	0.387	24.7	7.2	5.42	138.77	10.84	
	CLA *D3*	2.9	0.774	25.4	7.1			(G)	
	D4								
15	FCL *D1A*	0.6	0.811	27.1	7.5				
	FCL *D1B*	0.6	0.811	27.5	7.3				
	FCL *D2*	0.7	0.405	25.2	7.4	3.09	66.65	6.18	
	CLA *D3*	2.9	0.811	26.8	7.2			(G)	
	D4								
16	FCL *D1A*	0.5	0.836	25.8	7.3				
	FCL *D1B*	0.9	0.836	26.9	7.3				
	FCL *D2*	1.0	0.418	25.7	7.3	3.51	82.49	7.02	
	CLA *D3*	2.4	0.836	26.4	7.2			(G)	
	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:** October 10, 2018

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 Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** September **Year:** 2018

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*	1.6	0.714	26.4	7.3				
	FCL *D1B*	1.5	0.714	25.7	7.3				
	FCL *D2*	1.0	0.357	24.6	7.3	4.81	123.19	9.63	
	CLA *D3*	2.2	0.714	25.7	7.2			(G)	
	D4								
18	FCL *D1A*	0.4	0.717	26.5	7.4				
	FCL *D1B*	0.4	0.717	26.6	7.2				
	FCL *D2*	0.2	0.358	25.1	7.5	2.02	29.86	4.05	
	CLA *D3*	3.1	0.717	27.0	7.4			(G)	
	D4								
19	FCL *D1A*	0.9	0.710	26.7	7.5				
	FCL *D1B*	0.8	0.710	27.1	7.3				
	FCL *D2*	1.2	0.355	27.1	7.4	5.88	139.19	11.76	
	CLA *D3*	3.9	0.710	26.6	7.2			(G)	
	D4								
20	FCL *D1A*	0.3	0.770	28.2	7.3				
	FCL *D1B*	0.2	0.770	28.4	7.3				
	FCL *D2*	1.0	0.385	27.7	7.3	4.23	98.00	8.46	
	CLA *D3*	2.9	0.770	28.5	7.1			(G)	
	D4								
21	FCL *D1A*	1.1	0.777	28.8	7.3				
	FCL *D1B*	1.0	0.777	28.6	7.3				
	FCL *D2*	1.1	0.388	27.0	7.3	4.65	123.42	9.31	
	CLA *D3*	1.5	0.777	29.3	7.2			(G)	
	D4								
22	FCL *D1A*	0.4	0.809	26.2	7.2				
	FCL *D1B*	0.2	0.809	25.8	7.3				
	FCL *D2*	0.4	0.404	26.1	7.4	2.24	39.39	4.47	
	CLA *D3*	2.9	0.809	26.7	7.2			(G)	
	D4								
23	FCL *D1A*	1.1	0.793	26.5	7.2				
	FCL *D1B*	1.0	0.793	26.8	7.2				
	FCL *D2*	1.8	0.396	27.0	7.4	6.41	174.23	12.81	
	CLA *D3*	3.2	0.793	27.2	7.2			(G)	
	D4								
24	FCL *D1A*	0.5	0.783	26.8	7.5				
	FCL *D1B*	0.5	0.783	25.8	7.4				
	FCL *D2*	0.7	0.391	25.9	7.4	3.14	67.05	6.28	
	CLA *D3*	2.8	0.783	27.0	7.2			(G)	
	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*	1.5	0.750	27.9	7.1				
	FCL *D1B*	1.5	0.750	28.4	7.0				
	FCL *D2*	1.2	0.375	27.6	6.5	7.29	155.99	14.59	
	CLA *D3*	2.5	0.750	28.1	7.2			(G)	
	D4								
26	FCL *D1A*	1.0	0.738	26.9	7.7				
	FCL *D1B*	1.2	0.738	26.0	7.6				
	FCL *D2*	1.3	0.369	24.9	7.7	4.55	130.96	9.10	
	CLA *D3*	2.3	0.738	26.5	7.5			(G)	
	D4								
27	FCL *D1A*	1.3	0.772	26.7	7.7				
	FCL *D1B*	1.1	0.772	26.0	7.5				
	FCL *D2*	1.8	0.386	26.4	7.6	5.83	173.65	11.66	
	CLA *D3*	3.0	0.772	26.3	7.6			(G)	
	D4								
28	FCL *D1A*	1.2	0.788	24.3	7.4				
	FCL *D1B*	1.0	0.788	24.7	7.4				
	FCL *D2*	1.6	0.394	26.1	7.3	5.60	148.50	11.21	
	CLA *D3*	2.8	0.788	26.1	7.3			(G)	
	D4								
29	FCL *D1A*	1.2	0.809	25.8	7.3				
	FCL *D1B*	0.9	0.809	25.8	7.1				
	FCL *D2*	1.6	0.404	25.6	7.6	4.98	137.26	9.97	
	CLA *D3*	2.6	0.809	26.6	7.2			(G)	
	D4								
30	FCL *D1A*	0.9	0.831	26.2	7.3				
	FCL *D1B*	0.8	0.831	26.1	7.5				
	FCL *D2*	1.1	0.415	24.6	7.5	3.52	90.08	7.04	
	CLA *D3*	2.4	0.831	25.7	7.2			(G)	
	D4								
31	*D1A*								
	D1B								
	D2								
	D3								
	D4								
	Max					8.40	217.15	16.80	
	Min					2.02	29.10	4.05	
	Avg					5.28	129.09	10.56	
	SD					1.76	50.46	3.53	

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:** October 10, 2018

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 Utility
PLANT NAME OR NUMBER: Rio Bravo
PWS ID No.: 2400022
Plant ID No.: 20831
Month: September
Year: 2018
Type of treatment: X Conventional
Unconventional explain:

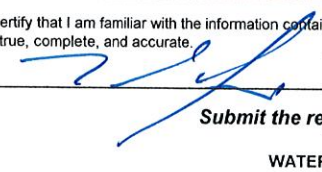
Note: Systems are required to run one TOC Sample Set every month. Additional space is provided for those systems that do additional sampling

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	9/17	120	3.55	2.87	19.2	25	0.77			0.77
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	3.55	2.87	19.15		0.77			0.77
Max		120.00	3.55	2.87	19.15		0.77			0.77
Min		120.00	3.55	2.87	19.15		0.77			0.77

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	3.55	2.87	19.2	NA	0.77

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: October 10, 2018

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 Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** September **Year:** 2018

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							
1	1	0.438	0.633	91.20	39.91	1.00	39.91	0.000	0.000
	2	0.596	0.880	91.20	29.12	1.00	29.12	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
2	1	0.365	0.822	86.10	23.05	1.00	23.05	0.000	0.000
	2	0.510	1.158	86.10	10.68	1.00	10.68	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
3	1	0.395	0.847	86.20	0.00	1.00	0.00	0.006	0.50
	2	0.539	1.211	86.20	0.00	1.00	0.00	0.018	
	3	X	X	X	X	X	X	X	
	4								
	5								
4	1	0.388	0.788	84.50	0.00	1.00	0.00	0.001	0.25
	2	0.541	1.135	84.50	0.00	1.00	0.00	0.001	
	3	X	X	X	X	X	X	X	
	4								
	5								
5	1	0.381	0.798	84.20	0.00	1.00	0.00	0.001	0.25
	2	0.529	1.078	84.20	0.00	1.00	0.00	0.002	
	3	X	X	X	X	X	X	X	
	4								
	5								
6	1	0.300	0.601	84.70	0.00	1.00	0.00	0.050	2.25
	2	0.417	0.840	84.70	0.00	1.00	0.00	0.071	
	3	X	X	X	X	X	X	X	
	4								
	5								
7	1	0.376	0.668	86.00	7.33	1.00	7.33	0.000	0.000
	2	0.524	0.838	86.00	26.75	1.00	26.75	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
8	1	0.249	0.568	85.90	32.71	1.00	32.71	0.000	0.000
	2	0.590	1.500	85.90	15.42	1.00	15.42	0.000	
	3	X	X	X	X	X	X	X	
	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							
9	1	0.294	0.563	83.50	0.00	1.00	0.00	0.002	0.25
	2	0.410	0.774	83.50	0.00	1.00	0.00	0.002	
	3	X	X	X	X	X	X	X	
	4								
	5								
10	1	0.242	0.548	87.30	0.00	1.00	0.00	0.003	0.25
	2	0.338	0.761	87.30	0.00	1.00	0.00	0.004	
	3	X	X	X	X	X	X	X	
	4								
	5								
11	1	0.353	0.610	80.50	9.36	1.00	9.36	0.000	0.25
	2	0.481	0.801	80.50	0.00	1.00	0.00	0.001	
	3	X	X	X	X	X	X	X	
	4								
	5								
12	1	0.286	0.598	80.10	35.43	1.00	35.43	0.000	0.000
	2	0.400	0.831	80.10	6.05	1.00	6.05	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
13	1	0.355	0.596	79.70	33.03	1.00	33.03	0.000	0.25
	2	0.497	0.824	79.70	0.00	1.00	0.00	0.001	
	3	X	X	X	X	X	X	X	
	4								
	5								
14	1	0.370	0.622	82.80	34.77	1.00	34.77	0.000	0.000
	2	0.512	0.856	82.80	24.80	1.00	24.80	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
15	1	0.318	0.648	82.90	0.00	1.00	0.00	0.001	0.25
	2	0.446	0.905	82.90	0.00	1.00	0.00	0.002	
	3	X	X	X	X	X	X	X	
	4								
	5								
16	1	0.330	0.854	84.20	0.00	1.00	0.00	0.001	0.25
	2	0.458	1.192	84.20	0.00	1.00	0.00	0.003	
	3	X	X	X	X	X	X	X	
	4								
	5								

SUBMITTED BY: Tomas Sanchez Jr. **Certificate No. and Grade:** WS0012772, B **Date:** October 10, 2018

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 Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** September **Year:** 2018

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)
		OPERATIONAL DATA							
17	1	0.298	0.649	83.60	32.61	1.00	32.61	0.000	0.25
	2	0.408	0.910	83.60	0.00	1.00	0.00	0.009	
	3	X	X	X	X	X	X	X	
	4								
	5								
18	1	0.306	0.568	83.00	18.88	1.00	18.88	0.000	0.000
	2	0.416	0.785	83.00	16.50	1.00	16.50	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
19	1	0.333	0.830	80.20	0.00	1.00	0.00	0.002	0.50
	2	0.500	1.148	80.20	0.00	1.00	0.00	0.005	
	3	X	X	X	X	X	X	X	
	4								
	5								
20	1	0.301	0.624	83.20	31.04	1.00	31.04	0.000	0.000
	2	0.408	0.834	83.20	8.86	1.00	8.86	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
21	1	0.350	0.653	82.30	16.00	1.00	16.00	0.000	0.25
	2	0.476	0.858	82.30	0.00	1.00	0.00	0.001	
	3	X	X	X	X	X	X	X	
	4								
	5								
22	1	0.290	0.687	80.60	26.58	1.00	26.58	0.000	0.25
	2	0.401	0.933	80.60	2.06	1.00	2.06	0.008	
	3	X	X	X	X	X	X	X	
	4								
	5								
23	1	0.301	0.656	87.90	33.11	1.00	33.11	0.000	0.25
	2	0.418	0.911	87.90	0.00	1.00	0.00	0.001	
	3	X	X	X	X	X	X	X	
	4								
	5								
24	1	0.320	0.820	83.10	0.00	1.00	0.00	0.002	0.25
	2	0.420	1.129	83.10	0.00	1.00	0.00	0.004	
	3	X	X	X	X	X	X	X	
	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	0.278	0.625	82.30	0.00	1.00	0.00	0.008	0.25
	2	0.361	0.867	82.30	0.00	1.00	0.00	0.003	
	3	X	X	X	X	X	X	X	
	4								
	5								
26	1	0.335	0.622	86.00	0.00	1.00	0.00	0.001	0.25
	2	0.451	0.844	86.00	0.00	1.00	0.00	0.002	
	3	X	X	X	X	X	X	X	
	4								
	5								
27	1	0.280	0.629	90.20	36.10	1.00	36.10	0.000	0.000
	2	0.385	0.868	90.20	26.19	1.00	26.19	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
28	1	0.280	0.645	90.60	35.35	1.00	35.35	0.000	0.25
	2	0.383	0.887	90.60	0.00	1.00	0.00	0.001	
	3	X	X	X	X	X	X	X	
	4								
	5								
29	1	0.255	0.916	87.00	27.53	1.00	27.53	0.000	0.75
	2	0.354	1.289	87.00	0.00	1.00	0.00	0.004	
	3	X	X	X	X	X	X	X	
	4								
	5								
30	1	0.277	0.725	82.50	0.00	1.00	0.00	0.001	0.25
	2	0.360	0.973	82.50	24.25	1.00	24.25	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:** October 10, 2018

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 Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** September **Year:** 2018

DAILY MINIMUM INACTIVATION

Reactor Range	SUMMARY DATA					Reactor Range	SUMMARY DATA				
	Date	Min Dose (mJ/cm^2)	Inactivation Credit Achieved: Giardia Log	Virus Log	Crypto Log		Date	Min Dose (mJ/cm^2)	Min Inactivation: Giardia Log	Virus Log	Crypto Log
1 to 3	1	29.12	4.00	0.21	1.00	1 to 3	9	0.00*	1.00	0.00	1.00
	2	10.68	2.95	0.00	1.00		10	0.00*	1.00	0.00	1.00
	3	0.00*	1.00	0.00	1.00		11	0.00*	1.00	0.00	1.00
	4	0.00*	1.00	0.00	1.00		12	6.05	2.17	0.00	1.00
	5	0.00*	1.00	0.00	1.00		13	0.00*	1.00	0.00	1.00
	6	0.00*	1.00	0.00	1.00		14	24.80	4.00	0.07	1.00
	7	7.33	2.43	0.00	1.00		15	0.00*	1.00	0.00	1.00
	8	15.42	3.53	0.00	1.00		16	0.00*	1.00	0.00	1.00

DAILY MINIMUM INACTIVATION

Reactor Range	SUMMARY DATA					Reactor Range	SUMMARY DATA				
	Date	Min Dose (mJ/cm^2)	Min Inactivation: Giardia Log	Virus Log	Crypto Log		Date	Min Dose (mJ/cm^2)	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	16.50	3.61	0.00	1.00		26	0.00*	1.00	0.00	1.00
	19	0.00*	1.00	0.00	1.00		27	26.19	4.00	0.12	1.00
	20	8.86	2.68	0.00	1.00		28	0.00*	1.00	0.00	1.00
	21	0.00*	1.00	0.00	1.00		29	0.00*	1.00	0.00	1.00
	22	2.06*	1.00	0.00	1.00		30	0.00*	1.00	0.00	1.00
	23	0.00*	1.00	0.00	1.00		31				1.00
	24	0.00*	1.00	0.00	1.00						

Total volume of water treated by all CDA reactors:	23.17	MG
Total volume of off-spec water produced by all CDA reactors:	0.22	MG
Percentage of off-spec water produced by all CDA reactors:	0.96	%
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: 2, 4, 6, 13, 15, 29, 30,

SUBMITTED BY: Tomas Sanchez Jr

Certificate No. and Grade: WS0012772, B **Date:** October 10, 2018

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 Utility

PLANT NAME OR NUMBER: Rio Bravo

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

Month: September **Year:** 2018

CALIBRATION DATA

CDA Reactor Number	UV Sensor Calibration Report for Calculated Dose Reactors									
	Calibration Date and Data	Duty Sensor	Duty Sensor Serial #	Ref Sensor Serial #	Duty Sensor Reading (mJ/cm^2)	Ref Sensor Reading (mJ/cm^2)	Cal Ratio	Duty Sensor Replaced?	Calculated Sensor CF
UVCD No. 1	Previous Month's Sensor CF	1	92	38	68.10	67.20	1.01	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	9/1/18	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 2	Previous Month's Sensor CF	1	44	38	64.60	66.30	0.97	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	9/1/18	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 3	Previous Month's Sensor CF	1	X	X	ND	ND	nd		off-line
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	9/1/18	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

CDA Reactor Number	UV Sensor Calibration Report for Calculated Dose Reactors								
	Calibration Date	Duty Sensor	Duty Sensor Serial #	Ref Sensor Serial #	Duty Sensor Reading (mJ/cm^2)	Ref Sensor Reading (mJ/cm^2)	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: October 10, 2018

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 Utility

PLANT NAME OR NUMBER: Rio Bravo

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

Month: September **Year:** 2018

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/cm^2)	Ref Sensor Reading (mJ/cm^2)	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/cm^2)	Ref Sensor Reading (mJ/cm^2)	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: October 10, 2018

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 Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 Plant ID 20831 Month: September Year: 2018

NA

CALIBRATION DATA

Benchtop UVT Analyzer Serial Number: O0108955

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	9/1/18	78713	94.80	93.10	1.70	NA	NA
	2	9/3/18	78713	94.10	92.70	1.40	NA	NA
	3	9/10/18	78713	91.60	92.70	1.10	NA	NA
	4	9/17/18	78713	91.30	90.70	0.60	NA	NA
	5	9/24/18	78713	92.50	91.70	0.80	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: O0108955

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: October 10, 2018

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 Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** September **Year:** 2018

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		

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 Utility

PLANT NAME OR NUMBER: Rio Bravo

PWS ID No.: 2400022 **Plant ID No.:** 20831 **Month:** September **Year:** 2018

	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	12.40					12.40	217.35					217.35
2	4.50					4.50	1.00					1.00	11.35					11.35	201.22					201.22
3	4.50					4.50	1.00					1.00	8.48					8.48	197.51					197.51
4	4.50					4.50	1.00					1.00	7.00					7.00	135.65					135.65
5	4.50					4.50	1.00					1.00	7.37					7.37	154.29					154.29
6	4.50					4.50	1.00					1.00	6.90					6.90	133.09					133.09
7	4.50					4.50	1.00					1.00	6.45					6.45	89.65					89.65
8	4.50					4.50	1.00					1.00	9.36					9.36	132.13					132.13
9	4.50					4.50	1.00					1.00	6.81					6.81	132.56					132.56
10	4.50					4.50	1.00					1.00	6.23					6.23	127.40					127.40
11	4.50					4.50	1.00					1.00	9.34					9.34	206.82					206.82
12	4.50					4.50	1.00					1.00	10.23					10.23	197.48					197.48
13	4.50					4.50	1.00					1.00	3.34					3.34	29.10					29.10
14	4.50					4.50	1.00					1.00	9.42					9.42	138.84					138.84
15	4.50					4.50	1.00					1.00	4.09					4.09	66.65					66.65
16	4.50					4.50	1.00					1.00	4.51					4.51	82.49					82.49
17	4.50					4.50	1.00					1.00	5.81					5.81	123.19					123.19
18	4.50					4.50	1.00					1.00	5.63					5.63	29.86					29.86
19	4.50					4.50	1.00					1.00	6.88					6.88	139.19					139.19
20	4.50					4.50	1.00					1.00	6.91					6.91	98.00					98.00
21	4.50					4.50	1.00					1.00	5.65					5.65	123.42					123.42
22	4.50					4.50	1.00					1.00	3.24					3.24	39.39					39.39
23	4.50					4.50	1.00					1.00	7.41					7.41	174.23					174.23
24	4.50					4.50	1.00					1.00	4.14					4.14	67.05					67.05
25	4.50					4.50	1.00					1.00	8.29					8.29	155.99					155.99
26	4.50					4.50	1.00					1.00	5.55					5.55	130.96					130.96
27	4.50					4.50	1.00					1.00	9.83					9.83	173.77					173.77
28	4.50					4.50	1.00					1.00	6.60					6.60	148.50					148.50
29	4.50					4.50	1.00					1.00	5.98					5.98	137.26					137.26
30	4.50					4.50	1.00					1.00	4.52					4.52	90.08					90.08
31																								
MIN	4.50					4.50	1.00					1.00	3.24					3.24	29.10					29.10
AVG	4.50					4.50	1.00					1.00	6.99					6.99	129.10					129.10
MAX	4.50					4.50	1.00					1.00	12.40					12.40	217.35					217.35