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: January 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: February 10, 2019

TREATMENT PLANT PERFORMANCE

Total number of turbidity readings:	94	Number of 4-hour periods when plant was off-line:	92
Number of readings above 0.10 NTU:	7	Number of 4-hour periods when plant was on-line but turbidity data was not collected:	0
Number of readings above 0.3 NTU:	0		
Number of readings above 0.5 NTU:	0	Number of days when plant was on-line but individual filter turbidity data was not collected:	0
Number of readings above 1.0 NTU:	0		
Maximum allowable turbidity level:	0.3	Number of days with readings above 1.0 NTU:	0 (2)
Percentage of readings above this limit:	0.0 % (1)	Number of days with readings above 5.0 NTU:	0 (3)

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

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

Number of days with low inactivation (including UV) for no more than 4.0 consecutive hours:	0	Average log inactivation (including UV) for Giardia:	6.10
		Average log inactivation) (including UV) for viruses:	3700.89
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:	6.86
		Number of days with pH below 7.0 in the last disinfection zone:	3.00
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:	45 (at least 31 required) (8)		
Average disinfectant residual value:	2.27	Percentage of readings with a low residual this month:	0.0 % (6A)
Number of readings with a low residual:	0		
Number of readings with no detectable residual:	0	Percentage of readings with a low residual last month:	0.0 % (6B)

ADDITIONAL REPORTS & WORKSHEETS

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

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

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

No additional IFE Reports are required this month.

P.2-Turbidity Data P.3-Filter Data P.4&5-Disinfection Data P.6-TOCMOR

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

STATISTICAL ANALYSIS OF TURBIDITY DATA

Settled Water Stastical Summary	Maximum turbidity reading:	9.50 NTU	Average turbidity value:	3.22 NTU
	Minimum turbidity reading:	0.05 NTU	Standard deviation:	2.896 NTU
	95th percentile value:	8.23 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:	0.088 NTU
	95th percentile IFE value:	0.04 NTU		
CFE Stastical Summary	Maximum CFE turbidity reading:	0.13 NTU	Average CFE turbidity value:	0.07 NTU
	Minimum CFE turbidity reading:	0.01 NTU	Standard deviation:	0.031 NTU
	95th percentile CFE value:	0.11 NTU		

STATISTICAL ANALYSIS OF pH DATA

Last Zone pH Stastical Summary	Maximum pH reading:	7.65 pH	Average pH value:	7.19 pH
	Minimum pH reading:	6.86 pH	Standard deviation:	0.172 pH
	95th percentile value:	7.47 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:** 1,927

Month: January **Year:** 2019 **Population:** 6,744

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	0.765	0.436	95	140	7.4	4.0					0.09	X	X	X	0.08	0.10	2.1	
2	0.756	0.185	40	140	0.7	0.3					X	X	X	X	0.10	0.10	2.0	
3	0.931	0.433	25	140	0.8	0.4					X	X	X	0.10	0.08	0.08	2.0	
4	0.907	0.605	29	140	0.6	0.6					0.10	X	X	0.09	0.08	0.07	2.6	
5	0.856	0.532	38	140	5.6	9.5					0.06	X	X	0.04	0.04	0.03	2.1	
6	0.926	0.464	42	140	7.7	8.2					X	X	X	0.08	0.06	0.05	2.5	
7	0.823	0.521	34	140	8.4	0.5					X	X	X	0.08	0.09	0.09	2.6	
8	0.870	0.507	40	140	7.2	0.3					X	X	X	0.10	0.10	0.10	1.6	
9	0.841	0.460	41	140	3.4	0.2					X	X	X	0.10	0.12	0.12	1.4	
10	0.910	0.567	16	140	7.3	6.3					0.13	X	X	0.11	0.11	0.11	1.6	
11	0.773	0.225	12	140	0.7	0.4					X	X	X	X	0.09	0.09	1.7	
12	0.822	0.770	13	140	2.0	0.4					X	X	X	X	0.10	0.10	1.1	
13	0.896	0.853	37	140	0.8	0.5					0.09	X	X	X	0.09	0.10	1.8	
14	0.822	0.503	41	140	0.6	0.4					0.10	X	X	0.09	0.10	0.08	1.9	
15	0.915	0.399	33	140	6.8	5.7					0.13	X	X	0.10	0.09	0.10	1.6	
16	0.864	0.561	31	140	6.3	5.8					X	X	X	0.10	0.09	0.09	1.9	
17	0.789	0.376	32	140	5.1	6.8					X	X	X	0.09	0.08	0.05	1.7	
18	0.882	0.459	41	140	6.7	2.6					X	X	X	0.04	0.03	0.06	1.5	
19	0.753	0.577	41	140	1.1	1.3					X	X	X	0.04	0.02	0.01	1.3	
20	0.811	0.594	47	140	0.4	3.1					X	X	X	0.03	0.02	0.02	1.7	
21	0.752	0.686	29	140	2.3	1.1					X	X	X	0.08	0.07	0.09	2.0	
22	1.085	0.484	30	140	5.1	3.7					0.04	X	X	0.06	0.06	0.07	1.7	
23	0.828	0.569	35	140	1.3	1.6					X	X	X	0.07	0.07	0.07	1.6	
24	0.775	0.527	44	140	1.5	0.1					X	X	X	X	0.04	0.03	1.7	
25	0.818	0.498	43	140	1.5	0.1					X	X	X	0.02	0.03	0.03	1.4	
26	0.774	0.314	37	140	6.5	4.6					X	X	X	0.02	0.02	0.01	1.6	
27	0.793	0.428	23	140	3.0	0.3					X	X	X	X	0.01	0.01	1.4	
28	0.860	0.501	27	160	4.3	0.4					X	X	X	0.03	0.06	0.08	1.5	
29	0.971	0.543	32	160	8.2	0.5					X	X	X	0.09	0.09	0.09	1.4	
30	0.821	0.524	24	160	8.2	0.6					X	X	X	0.10	0.09	0.09	1.4	
31	0.851	0.296	45	160	5.9	2.5					X	X	X	0.07	0.04	0.03	1.4	
Total	26.240	15.397		Max	8.4	9.5												
Avg	0.846	0.497		Avg	4.1	2.3												
Max	1.085	0.853		95th %	8.2	7.5												
Min	0.752	0.185		Min	0.4	0.1												
				95th percentile based on data from all basins						8.2								

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: Tomas Sanchez Jr. **Certificate No. and Grade:** WS0012772, B **Date:** February 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:** January **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	0.08		0.06		0.07		0.06													
2	0.08		0.06		0.09		0.05													
3	0.06		0.09		0.06		0.05													
4	0.06		0.06		0.07		0.08													
5	0.06		0.10		0.07		0.05													
6	0.09		0.16		0.05		0.05													
7	0.06		0.08		0.08		0.07													
8	0.07		0.08		0.12		0.07													
9	0.12		0.08		0.15		0.17													
10	0.08		0.19		0.08		0.11													
11	0.13		0.09		0.06		0.07													
12	0.10		0.20		0.08		0.10													
13	0.10		0.13		0.27		0.18													
14	0.14		0.15		0.14		0.12													
15	0.10		0.28		0.11		0.20													
16	0.08		0.08		0.11		0.07													
17	0.09		0.06		0.08		0.06													
18	0.10		0.10		0.05		0.06													
19	0.08		0.17		0.05		0.06													
20	0.07		0.11		0.06		0.04													
21	0.08		0.17		0.08		0.12													
22	0.09		0.15		0.07		0.07													
23	0.07		0.08		0.09		0.05													
24	0.07		0.06		0.06		0.06													
25	0.04		0.11		0.04		0.13													
26	0.04		0.06		0.06		0.05													
27	0.05		0.05		0.04		0.04													
28	0.10		0.11		0.08		0.06													
29	0.07		0.08		0.07		0.08													
30	0.06		0.07		0.09		0.06													
31	0.06		0.07		0.08		0.06													

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:** February 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:** January **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*	1.4	0.770	17.0	7.0	2.99	66.52	5.98 (G)	
	FCL *D1B*	1.3	0.770	17.0	7.1				
	FCL *D2*	1.1	0.385	17.0	7.1				
	CLA *D3*	3.3	0.770	17.0	7.1				
	D4								
18	FCL *D1A*	1.4	0.824	19.4	7.2	2.40	56.87	4.80 (G)	
	FCL *D1B*	1.2	0.824	20.4	7.0				
	FCL *D2*	0.7	0.412	20.8	7.3				
	CLA *D3*	1.9	0.824	19.6	6.9				
	D4								
19	FCL *D1A*	1.5	0.810	18.7	7.1	4.26	110.26	8.53 (G)	
	FCL *D1B*	1.6	0.810	18.6	7.1				
	FCL *D2*	1.8	0.405	19.6	7.0				
	CLA *D3*	2.4	0.810	17.4	7.2				
	D4								
20	FCL *D1A*	1.7	0.766	19.0	7.0	4.93	127.01	9.87 (G)	
	FCL *D1B*	1.5	0.766	18.8	7.1				
	FCL *D2*	2.1	0.383	18.9	7.1				
	CLA *D3*	3.6	0.766	17.8	6.9				
	D4								
21	FCL *D1A*	1.7	0.766	19.3	7.2	4.68	119.38	9.37 (G)	
	FCL *D1B*	1.8	0.766	19.5	7.2				
	FCL *D2*	1.8	0.383	19.0	7.2				
	CLA *D3*	4.1	0.766	17.5	7.2				
	D4								
22	FCL *D1A*	1.4	0.770	18.3	7.2	3.67	90.28	7.33 (G)	
	FCL *D1B*	1.5	0.770	18.4	7.2				
	FCL *D2*	1.4	0.385	19.3	7.3				
	CLA *D3*	3.3	0.770	19.4	7.2				
	D4								
23	FCL *D1A*	1.2	0.759	15.1	7.2	2.82	68.97	5.65 (G)	
	FCL *D1B*	1.2	0.759	15.1	7.1				
	FCL *D2*	1.3	0.379	16.4	7.3				
	CLA *D3*	2.9	0.759	16.0	7.1				
	D4								
24	FCL *D1A*	1.1	0.788	16.0	7.2	1.89	41.10	3.77 (G)	
	FCL *D1B*	1.0	0.788	16.0	7.1				
	FCL *D2*	0.7	0.394	16.0	7.2				
	CLA *D3*	2.3	0.788	16.0	7.1				
	D4								

PERFORMANCE DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time=
25	FCL *D1A*	1.0	0.789	17.1	7.2	2.64	64.03	5.29 (G)	
	FCL *D1B*	1.2	0.789	17.1	7.2				
	FCL *D2*	1.2	0.394	16.8	7.2				
	CLA *D3*	2.5	0.789	16.8	7.2				
	D4								
26	FCL *D1A*	1.3	0.803	16.4	7.4	2.03	46.65	4.07 (G)	
	FCL *D1B*	1.3	0.803	16.7	7.4				
	FCL *D2*	0.7	0.401	16.3	7.5				
	CLA *D3*	3.1	0.803	16.2	7.4				
	D4								
27	FCL *D1A*	1.1	0.814	17.5	7.4	2.49	70.50	4.98 (G)	
	FCL *D1B*	1.2	0.814	17.5	7.4				
	FCL *D2*	1.4	0.407	16.9	7.5				
	CLA *D3*	1.8	0.814	17.9	7.4				
	D4								
28	FCL *D1A*	1.5	0.842	19.7	7.5	1.44	31.48	2.88 (G)	
	FCL *D1B*	1.1	0.842	19.2	7.5				
	FCL *D2*	0.3	0.421	17.9	7.5				
	CLA *D3*	2.4	0.842	18.7	7.6				
	D4								
29	FCL *D1A*	1.5	0.799	17.5	7.4	3.31	12,673.11	6.63 (G)	
	FCL *D1B*	1.9	0.799	18.3	7.4				
	FCL *D2*	1.4	0.399	17.3	7.6				
	CLA *D3*	3.1	0.799	181.0	7.7				
	D4								
30	FCL *D1A*	1.8	0.735	16.9	7.5	3.46	105.93	6.93 (G)	
	FCL *D1B*	1.9	0.735	17.9	7.6				
	FCL *D2*	1.9	0.367	15.7	7.5				
	CLA *D3*	2.3	0.735	15.0	7.3				
	D4								
31	FCL *D1A*	1.7	0.722	15.7	7.3	3.60	100.55	7.19 (G)	
	FCL *D1B*	1.8	0.722	15.6	7.3				
	FCL *D2*	1.9	0.361	15.4	7.3				
	CLA *D3*	2.3	0.722	15.0	7.3				
	D4								

	Giardia Log	Virus Log	Inact. Ratio
Max	4.93	#########	9.87
Min	1.44	31.48	2.88
Avg	2.86	3700.72	5.73
SD	0.86	19895.56	1.71

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:** February 10, 2019

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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:** January **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*	1.8	0.833	16.1	7.3	2.57	61.66	5.13 (G)	
	FCL *D1B*	1.6	0.833	17.1	7.2				
	FCL *D2*	1.0	0.416	17.0	7.3				
	CLA *D3*	3.0	0.833	16.7	7.3				
	D4								
2	FCL *D1A*	1.6	0.810	15.3	7.1	2.62	63.73	5.23 (G)	
	FCL *D1B*	1.7	0.810	15.6	7.2				
	FCL *D2*	1.2	0.405	15.4	7.3				
	CLA *D3*	3.0	0.810	15.0	7.2				
	D4								
3	FCL *D1A*	1.6	0.799	14.7	7.3	2.53	62.08	5.06 (G)	
	FCL *D1B*	1.8	0.799	14.8	7.3				
	FCL *D2*	1.2	0.399	15.0	7.4				
	CLA *D3*	3.4	0.799	14.2	7.2				
	D4								
4	FCL *D1A*	1.1	0.781	16.8	7.3	1.75	35.66	3.51 (G)	
	FCL *D1B*	1.2	0.781	16.2	7.4				
	FCL *D2*	0.5	0.390	15.8	7.3				
	CLA *D3*	3.1	0.781	16.0	6.9				
	D4								
5	FCL *D1A*	1.8	0.742	15.0	7.4	3.18	73.79	6.36 (G)	
	FCL *D1B*	1.9	0.742	15.1	7.4				
	FCL *D2*	1.2	0.371	15.8	7.2				
	CLA *D3*	4.3	0.742	15.5	7.2				
	D4								
6	FCL *D1A*	1.3	0.741	16.6	7.3	2.87	70.08	5.74 (G)	
	FCL *D1B*	1.2	0.741	16.9	7.4				
	FCL *D2*	1.3	0.370	15.5	7.4				
	CLA *D3*	3.5	0.741	16.3	7.4				
	D4								
7	FCL *D1A*	1.6	0.769	17.0	7.1	2.46	46.81	4.91 (G)	
	FCL *D1B*	1.6	0.769	17.1	7.2				
	FCL *D2*	0.5	0.384	17.1	7.3				
	CLA *D3*	4.4	0.769	18.0	7.0				
	D4								
8	FCL *D1A*	1.2	0.795	17.3	7.1	1.90	33.42	3.80 (G)	
	FCL *D1B*	1.3	0.795	17.1	7.1				
	FCL *D2*	0.3	0.397	17.2	7.1				
	CLA *D3*	3.8	0.795	17.8	7.1				
	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*	1.1	0.816	17.7	7.2	1.93	40.76	3.86 (G)	
	FCL *D1B*	1.1	0.816	17.9	7.2				
	FCL *D2*	0.6	0.408	17.9	7.2				
	CLA *D3*	2.7	0.816	17.4	7.1				
	D4								
10	FCL *D1A*	0.9	0.825	19.7	7.2	2.26	49.81	4.51 (G)	
	FCL *D1B*	0.8	0.825	19.5	7.1				
	FCL *D2*	0.8	0.412	18.8	7.2				
	CLA *D3*	2.3	0.825	18.0	7.1				
	D4								
11	FCL *D1A*	0.5	0.819	19.0	7.1	2.22	44.11	4.44 (G)	
	FCL *D1B*	0.5	0.819	20.0	7.1				
	FCL *D2*	0.8	0.409	19.0	7.1				
	CLA *D3*	3.0	0.819	19.0	7.2				
	D4								
12	FCL *D1A*	0.6	0.796	18.0	7.1	2.02	39.40	4.04 (G)	
	FCL *D1B*	0.7	0.796	18.0	7.2				
	FCL *D2*	0.7	0.398	18.0	7.1				
	CLA *D3*	2.9	0.796	18.0	7.1				
	D4								
13	FCL *D1A*	1.0	0.796	18.3	7.2	2.88	66.24	5.75 (G)	
	FCL *D1B*	1.2	0.796	18.8	7.1				
	FCL *D2*	1.2	0.398	17.6	7.1				
	CLA *D3*	2.9	0.796	17.4	7.1				
	D4								
14	FCL *D1A*	1.0	0.750	19.8	7.3	3.61	89.99	7.22 (G)	
	FCL *D1B*	1.1	0.750	20.3	7.2				
	FCL *D2*	1.3	0.375	20.9	7.2				
	CLA *D3*	2.5	0.750	17.6	7.1				
	D4								
15	FCL *D1A*	1.0	0.737	17.2	7.4	3.18	73.01	6.37 (G)	
	FCL *D1B*	1.1	0.737	18.3	7.3				
	FCL *D2*	1.3	0.368	16.7	7.4				
	CLA *D3*	4.3	0.737	17.7	7.3				
	D4								
16	FCL *D1A*	1.5	0.782	18.8	7.1	4.15	99.00	8.30 (G)	
	FCL *D1B*	1.4	0.782	17.7	7.0				
	FCL *D2*	1.6	0.391	19.1	7.0				
	CLA *D3*	3.3	0.782	17.5	7.2				
	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:** February 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: January

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	1/7	140	5.19	2.60	49.9	25	2.00			2.00
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	5.19	2.60	49.90		2.00			2.00
Max		140.00	5.19	2.60	49.90		2.00			2.00
Min		140.00	5.19	2.60	49.90		2.00			2.00

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	5.19	2.60	49.9	NA	2.00

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: February 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:** January **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	17.39	3.67	0.00	1.00	1 to 3	9	31.07	4.00	0.27	1.00
	2	23.90	4.00	0.04	1.00		10	17.22	3.66	0.00	1.00
	3	31.27	4.00	0.27	1.00		11	14.16	3.40	0.00	1.00
	4	15.80	3.56	0.00	1.00		12	28.32	4.00	0.18	1.00
	5	32.42	4.00	0.31	1.00		13	0.00*	1.00	0.00	1.00
	6	36.01	4.00	0.41	1.00		14	2.87	1.44	0.00	1.00
	7	32.21	4.00	0.30	1.00		15	34.76	4.00	0.38	1.00
	8	35.42	4.00	0.40	1.00		16	2.25*	1.10	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	2.03*	1.00	0.00	1.00	1 to 3	25	0.00*	1.00	0.00
	18	24.41	4.00	0.06	1.00		26	31.39	4.00	0.28
	19	28.34	4.00	0.18	1.00		27	6.44	2.25	0.00
	20	32.70	4.00	0.32	1.00		28	37.79	4.00	0.46
	21	3.58	1.70	0.00	1.00		29	37.99	4.00	0.47
	22	15.74	3.55	0.00	1.00		30	39.59	4.00	0.52
	23	0.00*	1.00	0.00	1.00		31	28.09	4.00	0.18
	24	38.17	4.00	0.48	1.00					

Total volume of water treated by all CDA reactors:	21.84	MG
Total volume of off-spec water produced by all CDA reactors:	0.05	MG
Percentage of off-spec water produced by all CDA reactors:	0.21	%
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: (January, 2019) 2, 3, 4, 5, 6, 9, 12, 13, 14, 15, 16, 18, 20, 21, 22, 23, 24, 25, 26, 29, 31

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B **Date:** February 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:** January **Year:** 2019

TRUE

VALIDATED OPERATIONAL CONDITIONS

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

PERFORMANCE DATA

Date	Reactor	Total Product. (MG)	Max. Flow Rate (MGD)	Min UV Trans. (%)	Minimum Meas'd UV Dose (mJ/cm^2)	Sensor CF	Adjusted Minimum UV Dose (mJ/cm^2)	Total Off-Spec Product. (MG)	Consec. Off-Spec Hours (hr)
17	1	X	X	X	X	X	X	X	0.25
	2	0.434	1.230	91.84	2.03	1.00	2.03	0.009	
	3	0.290	0.798	91.84	37.43	1.00	37.43	0.000	
	4								
	5								
18	1	X	X	X	X	X	X	X	0.000
	2	0.441	1.185	90.84	24.41	1.00	24.41	0.000	
	3	0.301	0.727	90.84	35.82	1.00	35.82	0.000	
	4								
	5								
19	1	X	X	X	X	X	X	X	0.000
	2	0.419	1.173	92.55	28.34	1.00	28.34	0.000	
	3	0.280	0.788	92.55	40.21	1.00	40.21	0.000	
	4								
	5								
20	1	X	X	X	X	X	X	X	0.000
	2	0.367	1.005	92.11	32.70	1.00	32.70	0.000	
	3	0.271	0.675	92.11	45.82	1.00	45.82	0.000	
	4								
	5								
21	1	X	X	X	X	X	X	X	0.000
	2	0.351	0.933	91.82	3.58	1.00	3.58	0.000	
	3	0.257	0.645	91.82	42.50	1.00	42.50	0.000	
	4								
	5								
22	1	X	X	X	X	X	X	X	0.000
	2	0.526	0.925	92.11	15.74	1.00	15.74	0.000	
	3	0.351	0.604	92.11	48.77	1.00	48.77	0.000	
	4								
	5								
23	1	X	X	X	X	X	X	X	0.25
	2	0.402	0.851	93.16	0.00	1.00	0.00	0.007	
	3	0.282	0.587	93.16	0.00	1.00	0.00	0.005	
	4								
	5								
24	1	X	X	X	X	X	X	X	0.000
	2	0.370	0.855	91.53	38.17	1.00	38.17	0.000	
	3	0.272	0.590	91.53	53.20	1.00	53.20	0.000	
	4								
	5								

PERFORMANCE DATA

Date	Reactor	Total Product. (MG)	Max. Flow Rate (MGD)	Min UV Trans. (%)	Minimum Meas'd UV Dose (mJ/cm^2)	Sensor CF	Adjusted Minimum UV Dose (mJ/cm^2)	Total Off-Spec Product. (MG)	Consec. Off-Spec Hours (hr)
25	1	0.299	0.650	93.11	0.00	1.00	0.00	0.005	0.25
	2	0.321	0.807	93.11	0.00	1.00	0.00	0.007	
	3	X	X	X	X	X	X	X	
	4								
	5								
26	1	0.290	0.760	92.89	31.39	1.00	31.39	0.000	0.000
	2	0.362	1.021	92.89	32.04	1.00	32.04	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
27	1	0.300	0.674	90.72	6.44	1.00	6.44	0.000	0.000
	2	0.382	0.909	90.72	38.86	1.00	38.86	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
28	1	X	X	X	X	X	X	X	0.000
	2	0.439	0.927	93.45	37.79	1.00	37.79	0.000	
	3	0.297	0.626	93.45	52.74	1.00	52.74	0.000	
	4								
	5								
29	1	X	X	X	X	X	X	X	0.000
	2	0.464	0.879	93.21	37.99	1.00	37.99	0.000	
	3	0.330	0.635	93.21	51.70	1.00	51.70	0.000	
	4								
	5								
30	1	X	X	X	X	X	X	X	0.000
	2	0.407	0.862	94.43	39.59	1.00	39.59	0.000	
	3	0.292	0.591	94.43	55.41	1.00	55.41	0.000	
	4								
	5								
31	1	X	X	X	X	X	X	X	
	2	0.401	1.017	92.60	28.09	1.00	28.09	0.000	
	3	0.305	0.755	92.60	43.10	1.00	43.10	0.000	
	4								
	5								

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B **Date:** February 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:** January **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)
		OPERATIONAL DATA							
1	1	X	X	X	X	X	X	X	0.000
	2	0.401	0.949	87.32	17.39	1.00	17.39	0.000	
	3	0.270	0.618	87.32	43.50	1.00	43.50	0.000	
	4								
	5								
2	1	X	X	X	X	X	X	X	0.000
	2	0.371	1.297	88.67	23.90	1.00	23.90	0.000	
	3	0.254	0.858	88.67	34.23	1.00	34.23	0.000	
	4								
	5								
3	1	X	X	X	X	X	X	X	0.000
	2	0.422	0.873	88.91	31.27	1.00	31.27	0.000	
	3	0.291	0.611	88.91	44.22	1.00	44.22	0.000	
	4								
	5								
4	1	X	X	X	X	X	X	X	0.000
	2	0.447	0.975	88.64	15.80	1.00	15.80	0.000	
	3	0.320	0.652	88.64	40.33	1.00	40.33	0.000	
	4								
	5								
5	1	X	X	X	X	X	X	X	0.000
	2	0.399	0.942	89.06	32.42	1.00	32.42	0.000	
	3	0.296	0.652	89.06	45.14	1.00	45.14	0.000	
	4								
	5								
6	1	X	X	X	X	X	X	X	0.000
	2	0.448	0.863	89.32	36.01	1.00	36.01	0.000	
	3	0.309	0.570	89.32	50.43	1.00	50.43	0.000	
	4								
	5								
7	1	X	X	X	X	X	X	X	0.000
	2	0.442	0.896	90.67	32.21	1.00	32.21	0.000	
	3	0.288	0.590	90.67	45.17	1.00	45.17	0.000	
	4								
	5								
8	1	X	X	X	X	X	X	X	0.000
	2	0.465	0.916	88.33	35.42	1.00	35.42	0.000	
	3	0.303	0.610	88.33	48.34	1.00	48.34	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							
9	1	X	X	X	X	X	X	X	0.000
	2	0.409	0.923	87.62	31.07	1.00	31.07	0.000	
	3	0.266	0.636	87.62	45.23	1.00	45.23	0.000	
	4								
	5								
10	1	X	X	X	X	X	X	X	0.000
	2	0.491	0.948	88.43	17.22	1.00	17.22	0.000	
	3	0.318	0.621	88.43	44.73	1.00	44.73	0.000	
	4								
	5								
11	1	X	X	X	X	X	X	X	0.000
	2	0.401	0.919	91.38	14.16	1.00	14.16	0.000	
	3	0.261	0.609	91.38	47.01	1.00	47.01	0.000	
	4								
	5								
12	1	X	X	X	X	X	X	X	0.000
	2	0.398	1.145	85.69	28.32	1.00	28.32	0.000	
	3	0.259	0.741	85.69	40.31	1.00	40.31	0.000	
	4								
	5								
13	1	X	X	X	X	X	X	X	0.25
	2	0.434	0.921	91.45	0.00	1.00	0.00	0.003	
	3	0.284	0.585	91.45	0.00	1.00	0.00	0.002	
	4								
	5								
14	1	X	X	X	X	X	X	X	0.000
	2	0.414	0.869	89.89	2.87	1.00	2.87	0.000	
	3	0.269	0.575	89.89	46.47	1.00	46.47	0.000	
	4								
	5								
15	1	X	X	X	X	X	X	X	0.000
	2	0.469	0.875	90.60	34.76	1.00	34.76	0.000	
	3	0.307	0.582	90.60	48.13	1.00	48.13	0.000	
	4								
	5								
16	1	X	X	X	X	X	X	X	0.25
	2	0.379	0.984	90.59	2.25	1.00	2.25	0.008	
	3	0.255	0.674	90.59	39.15	1.00	39.15	0.000	
	4								
	5								

SUBMITTED BY: Tomas Sanchez Jr.

Certificate No. and Grade: WS0012772, B **Date:** February 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: January **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: February 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: January **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	94.00	94.60	0.99	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	1/1/19	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 2	Previous Month's Sensor CF	1	38	44	94.60	93.70	1.01	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	1/1/19	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 3	Previous Month's Sensor CF	1	39	44	94.90	94.30	1.01	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	1/1/19	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: February 10, 2019

Other Action Taken

ry 10, 2019

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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: January

Year: 2019

CALIBRATION DATA

Benchtop UVT Analyzer Serial Number: PO108955

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	1/1/19	78713	90.00	91.50	1.50	NA	NA
	2	1/7/19	78713	91.60	90.60	1.00	NA	NA
	3	1/14/19	78713	91.50	92.40	0.90	NA	NA
	4	1/21/19	78713	92.90	93.20	0.30	NA	NA
	5	1/28/19	78713	93.30	93.10	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: PO108955

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: Februa

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: January 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	6.24					6.24	61.66					61.66
2	4.50					4.50	1.00					1.00	6.57					6.57	63.77					63.77
3	4.50					4.50	1.00					1.00	6.53					6.53	62.35					62.35
4	4.50					4.50	1.00					1.00	5.31					5.31	35.66					35.66
5	4.50					4.50	1.00					1.00	7.18					7.18	74.09					74.09
6	4.50					4.50	1.00					1.00	6.87					6.87	70.49					70.49
7	4.50					4.50	1.00					1.00	6.46					6.46	47.11					47.11
8	4.50					4.50	1.00					1.00	5.90					5.90	33.82					33.82
9	4.50					4.50	1.00					1.00	5.93					5.93	41.02					41.02
10	4.50					4.50	1.00					1.00	5.91					5.91	49.81					49.81
11	4.50					4.50	1.00					1.00	5.62					5.62	44.11					44.11
12	4.50					4.50	1.00					1.00	6.02					6.02	39.58					39.58
13	4.50					4.50	1.00					1.00	3.88					3.88	66.24					66.24
14	4.50					4.50	1.00					1.00	5.05					5.05	89.99					89.99
15	4.50					4.50	1.00					1.00	7.18					7.18	73.39					73.39
16	4.50					4.50	1.00					1.00	5.25					5.25	99.00					99.00
17	4.50					4.50	1.00					1.00	3.99					3.99	66.52					66.52
18	4.50					4.50	1.00					1.00	6.40					6.40	56.93					56.93
19	4.50					4.50	1.00					1.00	8.26					8.26	110.44					110.44
20	4.50					4.50	1.00					1.00	8.93					8.93	127.33					127.33
21	4.50					4.50	1.00					1.00	6.38					6.38	119.38					119.38
22	4.50					4.50	1.00					1.00	7.22					7.22	90.28					90.28
23	4.50					4.50	1.00					1.00	3.82					3.82	68.97					68.97
24	4.50					4.50	1.00					1.00	5.89					5.89	41.58					41.58
25	4.50					4.50	1.00					1.00	3.64					3.64	64.03					64.03
26	4.50					4.50	1.00					1.00	6.03					6.03	46.92					46.92
27	4.50					4.50	1.00					1.00	4.74					4.74	70.50					70.50
28	4.50					4.50	1.00					1.00	5.44					5.44	31.94					31.94
29	4.50					4.50	1.00					1.00	7.31					7.31	#######					#######
30	4.50					4.50	1.00					1.00	7.46					7.46	106.45					106.45
31	4.50					4.50	1.00					1.00	7.60					7.60	100.73					100.73
MIN	4.50					4.50	1.00					1.00	3.64					3.64	31.94					31.94
AVG	4.50					4.50	1.00					1.00	6.10					6.10	3700.89					3700.89
MAX	4.50					4.50	1.00					1.00	8.93					8.93	#######					#######

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: January

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		