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: October 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: Adolfo Vasquez

Certificate No. & Grade: WS0014046, B

Date: November 10, 2019

TREATMENT PLANT PERFORMANCE

Total number of turbidity readings:	110	Number of 4-hour periods when plant was off-line:	76
Number of readings above 0.10 NTU:	0	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:	5.07
		Average log inactivation) (including UV) for viruses:	57.62
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:	6.68
		Number of days with pH below 7.0 in the last disinfection zone:	7.00
Number of days with a low residual for more than 4.0 consecutive hours:	0 (5)	Number of days when disinfectant residual leaving the plant was not properly monitored:	0

DISTRIBUTION SYSTEM

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

Total number of readings this month:	45 (at least 31 required) (8)		
Average disinfectant residual value:	1.81	Percentage of readings with a low residual this month:	0.0 % (6A)
Number of readings with a low residual:	0		
Number of readings with no detectable residual:	0	Percentage of readings with a low residual last month:	0.0 % (6B)

ADDITIONAL REPORTS & WORKSHEETS

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

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

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

No additional IFE Reports are required this month.

P.2-Turbidity Data P.3-Filter Data P.4&5-Disinfection Data P.6-TOCMOR 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:	10.00 NTU	Average turbidity value:	1.74 NTU
	Minimum turbidity reading:	0.23 NTU	Standard deviation:	1.568 NTU
	95th percentile value:	4.18 NTU		
IFE Stastical Summary	Maximum IFE turbidity reading:	0.15 NTU	Average IFE turbidity value:	0.06 NTU
	Minimum IFEturbidity reading:	0.03 NTU	Standard deviation:	0.019 NTU
	95th percentile IFE value:	0.09 NTU		
CFE Stastical Summary	Maximum CFE turbidity reading:	0.10 NTU	Average CFE turbidity value:	0.06 NTU
	Minimum CFE turbidity reading:	0.03 NTU	Standard deviation:	0.011 NTU
	95th percentile CFE value:	0.08 NTU		

STATISTICAL ANALYSIS OF pH DATA

Last Zone pH Stastical Summary	Maximum pH reading:	7.62 pH	Average pH value:	7.10 pH
	Minimum pH reading:	6.68 pH	Standard deviation:	0.187 pH
	95th percentile value:	7.38 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: October **Year:** 2019 **Population:** 6,793

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	1.123	0.829	31	140	1.3	1.2					0.05	X	0.06	0.06	0.06	0.06	3.1	
2	1.047	0.872	31	140	1.3	1.3					X	X	X	0.06	0.06	0.06	2.4	
3	0.916	0.822	39	140	1.3	1.3					0.05	X	X	0.05	0.03	0.06	2.8	
4	0.943	0.836	42	140	1.3	1.2					X	X	X	0.06	0.06	0.05	2.7	
5	0.872	0.878	57	140	1.3	1.2					X	X	X	0.05	0.04	0.04	2.8	
6	1.058	0.963	27	140	1.3	1.3					0.05	X	X	0.06	0.06	0.05	3.2	
7	1.034	0.904	26	140	1.4	3.3					0.06	X	X	0.05	0.05	0.06	3.1	
8	0.981	1.002	24	140	1.5	1.4					X	X	X	0.05	0.05	0.04	2.2	
9	1.217	0.939	29	140	3.0	1.3					0.04	X	X	0.06	0.05	0.05	2.5	
10	1.025	0.849	35	140	1.1	1.5					0.05	X	X	0.08	0.06	0.06	2.0	
11	1.038	0.747	60	140	0.3	1.3					X	X	X	0.06	0.06	0.07	2.7	
12	0.833	0.775	64	140	0.4	1.3					X	X	X	0.06	0.08	0.07	2.2	
13	0.890	0.875	22	140	0.2	1.3					X	X	X	0.06	0.06	0.06	2.4	
14	0.950	1.032	28	120	3.7	1.2					X	X	X	0.06	0.05	0.05	2.5	
15	1.234	1.035	25	120	7.8	1.2					0.07	X	X	0.07	0.06	0.06	2.1	
16	0.959	0.867	30	140	1.3	1.2					0.07	X	X	0.06	0.06	0.06	2.5	
17	0.921	0.841	23	120	4.2	1.2					X	X	X	0.05	0.04	0.05	3.4	
18	0.986	0.888	31	140	0.9	2.1					X	X	X	0.05	0.04	0.04	2.6	
19	1.016	0.954	33	140	0.7	1.3					X	X	X	0.05	0.04	0.06	3.1	
20	1.087	0.985	28	140	0.7	1.3					0.06	X	X	0.08	0.05	0.06	2.3	
21	1.262	1.178	31	140	10.0	1.4					0.06	X	X	0.10	0.04	0.06	3.2	
22	1.104	1.045	31	140	3.1	1.3					0.08	X	X	0.07	0.05	0.07	2.8	
23	1.021	1.132	36	140	5.4	1.5					0.10	X	X	0.07	0.05	0.05	2.5	
24	1.046	1.145	40	140	1.1	1.5					0.05	X	X	0.05	0.05	0.05	3.1	
25	0.695	1.034	58	140	1.1	1.6					X	X	X	0.04	0.05	0.06	3.2	
26	0.834	1.127	71	140	0.9	1.6					X	X	X	0.05	0.05	0.06	3.1	
27	0.977	1.434	38	140	0.9	1.7					X	X	X	0.07	0.05	0.07	2.8	
28	0.962	1.510	39	140	1.3	1.8					0.07	X	X	0.06	0.05	0.06	2.3	
29	0.955	1.478	36	140	1.2	1.6					0.05	X	X	0.05	0.05	0.05	3.1	
30	0.926	1.019	30	140	1.3	1.5					0.06	X	X	0.05	0.06	0.06	3.5	
31	0.777	0.906	39	140	1.4	1.5					X	X	X	0.05	0.03	0.05	2.9	
Total	30.689	30.901		Max	10.0	3.3												
Avg	0.990	0.997		Avg	2.0	1.5												
Max	1.262	1.510		95th %	6.6	1.9												
Min	0.695	0.747		Min	0.2	1.2												
				95th percentile based on data from all basins						4.2								

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:** WS0014046, B **Date:** November 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: October 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		0.06		0.08													
2	0.09		0.04		0.06		0.03													
3	0.08		0.06		0.07		0.05													
4	0.06		0.06		0.13		0.08													
5	0.07		0.06		0.06		0.03													
6	0.08		0.07		0.05		0.04													
7	0.06		0.05		0.06		0.04													
8	0.05		0.07		0.06		0.06													
9	0.07		0.05		0.06		0.08													
10	0.15		0.05		0.08		0.08													
11	0.06		0.09		0.10		0.04													
12	0.06		0.07		0.08		0.04													
13	0.06		0.06		0.05		0.04													
14	0.06		0.08		0.07		0.10													
15	0.08		0.08		0.08		0.06													
16	0.06		0.05		0.06		0.07													
17	0.06		0.04		0.06		0.06													
18	0.05		0.03		0.05		0.03													
19	0.06		0.04		0.04		0.04													
20	0.06		0.05		0.06		0.04													
21	0.03		0.04		0.07		0.10													
22	0.08		0.06		0.08		0.05													
23	0.04		0.05		0.06		0.06													
24	0.05		0.05		0.05		0.04													
25	0.05		0.06		0.06		0.04													
26	0.06		0.06		0.08		0.05													
27	0.04		0.06		0.06		0.05													
28	0.04		0.12		0.06		0.06													
29	0.05		0.07		0.07		0.07													
30	0.05		0.05		0.08		0.05													
31	0.05		0.05		0.07		0.05													

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: Adolfo Vasquez

Certificate No. and Grade: WS0014046, B

Date: November 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:** October **Year:** 2019

DISINFECTION PROCESS PARAMETERS

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

PERFORMANCE DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time
1	FCL *D1A*	0.5	0.780	28.1	7.1				
	FCL *D1B*	0.5	0.780	27.0	7.0				
	FCL *D2*	0.9	0.390	26.9	7.0	4.49	88.62	8.98	
	CLA *D3*	3.5	0.780	27.9	6.9			(G)	
	D4								
2	FCL *D1A*	0.5	0.793	27.0	7.3				
	FCL *D1B*	0.6	0.793	26.8	7.3				
	FCL *D2*	0.6	0.396	26.6	7.3	3.28	65.23	6.56	
	CLA *D3*	3.3	0.793	28.1	7.2			(G)	
	D4								
3	FCL *D1A*	0.3	0.769	25.7	7.1				
	FCL *D1B*	0.4	0.769	25.6	7.2				
	FCL *D2*	0.5	0.384	25.5	7.1	2.67	43.50	5.33	
	CLA *D3*	3.3	0.769	25.2	7.2			(G)	
	D4								
4	FCL *D1A*	0.4	0.755	26.0	7.0				
	FCL *D1B*	0.4	0.755	25.0	7.1				
	FCL *D2*	0.6	0.377	25.0	7.1	3.11	59.28	6.21	
	CLA *D3*	2.7	0.755	25.0	7.2			(G)	
	D4								
5	FCL *D1A*	1.1	0.733	25.0	7.1				
	FCL *D1B*	1.0	0.733	26.0	7.0				
	FCL *D2*	0.8	0.366	25.0	7.1	4.39	92.53	8.79	
	CLA *D3*	2.9	0.733	25.0	7.2			(G)	
	D4								
6	FCL *D1A*	0.8	0.731	27.0	7.1				
	FCL *D1B*	1.0	0.731	27.0	7.1				
	FCL *D2*	0.4	0.365	27.0	7.1	3.67	64.79	7.35	
	CLA *D3*	3.8	0.731	27.0	7.0			(G)	
	D4								
7	FCL *D1A*	0.7	0.739	26.1	7.0				
	FCL *D1B*	1.0	0.739	26.0	7.0				
	FCL *D2*	0.4	0.369	26.0	7.1	3.23	58.63	6.47	
	CLA *D3*	3.1	0.739	29.2	7.1			(G)	
	D4								
8	FCL *D1A*	0.6	0.760	25.7	7.2				
	FCL *D1B*	0.8	0.760	25.8	7.1				
	FCL *D2*	0.4	0.380	26.3	7.2	2.80	50.95	5.59	
	CLA *D3*	2.9	0.760	26.7	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*	0.6	0.766	26.1	7.2				
	FCL *D1B*	0.9	0.766	26.0	7.2				
	FCL *D2*	0.5	0.383	26.9	7.2	3.24	60.66	6.48	
	CLA *D3*	3.3	0.766	28.2	7.0			(G)	
	D4								
10	FCL *D1A*	0.7	0.775	27.3	7.1				
	FCL *D1B*	0.8	0.755	27.2	6.9				
	FCL *D2*	0.7	0.388	27.0	7.1	4.25	84.50	8.50	
	CLA *D3*	3.3	0.755	27.7	6.8			(G)	
	D4								
11	FCL *D1A*	0.5	0.800	25.1	7.0				
	FCL *D1B*	0.4	0.800	24.8	6.8				
	FCL *D2*	0.7	0.400	25.2	7.0	3.27	62.23	6.54	
	CLA *D3*	2.9	0.800	24.0	6.7			(G)	
	D4								
12	FCL *D1A*	0.5	0.812	24.1	7.2				
	FCL *D1B*	0.7	0.812	23.3	7.2				
	FCL *D2*	0.6	0.406	23.7	7.1	2.39	49.12	4.77	
	CLA *D3*	1.9	0.812	24.3	7.1			(G)	
	D4								
13	FCL *D1A*	0.5	0.794	23.7	7.3				
	FCL *D1B*	0.5	0.794	22.6	7.4				
	FCL *D2*	0.8	0.397	22.9	7.4	2.91	62.81	5.82	
	CLA *D3*	3.1	0.794	23.3	7.4			(G)	
	D4								
14	FCL *D1A*	0.4	0.772	25.0	7.1				
	FCL *D1B*	0.6	0.772	25.0	7.0				
	FCL *D2*	0.4	0.386	25.0	7.1	2.43	41.92	4.86	
	CLA *D3*	2.9	0.772	24.0	7.2			(G)	
	D4								
15	FCL *D1A*	0.2	0.760	23.2	7.3				
	FCL *D1B*	0.2	0.760	23.0	7.1				
	FCL *D2*	0.2	0.380	23.7	7.2	1.69	21.74	3.38	
	CLA *D3*	3.2	0.760	24.0	7.4			(G)	
	D4								
16	FCL *D1A*	0.5	0.727	23.0	7.2				
	FCL *D1B*	0.7	0.727	23.0	7.1				
	FCL *D2*	0.3	0.364	24.0	7.1	2.19	34.78	4.38	
	CLA *D3*	3.2	0.727	23.0	7.1			(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: Adolfo Vasquez **Certificate No. and Grade:** WS0014046, B **Date:** November 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:** October **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*	0.9	0.744	24.2	7.1				
	FCL *D1B*	1.0	0.744	24.0	7.1				
	FCL *D2*	0.4	0.372	23.9	7.1	3.29	56.31	6.59	
	CLA *D3*	3.7	0.744	25.3	7.2			(G)	
	D4								
18	FCL *D1A*	0.9	0.762	23.5	7.1				
	FCL *D1B*	1.0	0.762	23.6	7.1				
	FCL *D2*	0.5	0.381	23.8	7.2	3.28	60.21	6.56	
	CLA *D3*	3.6	0.762	24.4	7.1			(G)	
	D4								
19	FCL *D1A*	0.7	0.769	25.1	7.1				
	FCL *D1B*	0.9	0.769	25.4	7.1				
	FCL *D2*	0.6	0.384	25.1	7.1	3.45	63.87	6.91	
	CLA *D3*	3.5	0.769	27.7	7.0			(G)	
	D4								
20	FCL *D1A*	0.5	0.786	24.3	7.2				
	FCL *D1B*	0.6	0.786	24.0	7.2				
	FCL *D2*	0.6	0.393	24.7	7.0	3.14	56.53	6.27	
	CLA *D3*	3.2	0.786	26.3	7.0			(G)	
	D4								
21	FCL *D1A*	0.4	0.793	24.2	7.0				
	FCL *D1B*	0.3	0.793	23.2	7.0				
	FCL *D2*	0.2	0.396	24.1	7.1	1.74	22.40	3.47	
	CLA *D3*	3.1	0.793	24.4	7.1			(G)	
	D4								
22	FCL *D1A*	0.5	0.779	23.1	6.9				
	FCL *D1B*	0.4	0.779	23.8	6.9				
	FCL *D2*	0.1	0.390	22.5	6.9	1.35	16.30	2.70	
	CLA *D3*	2.8	0.779	22.7	7.1			(G)	
	D4								
23	FCL *D1A*	0.6	0.755	23.6	7.0				
	FCL *D1B*	0.4	0.755	23.8	6.9				
	FCL *D2*	0.8	0.378	22.5	7.0	3.45	62.90	6.89	
	CLA *D3*	3.6	0.755	23.2	6.9			(G)	
	D4								
24	FCL *D1A*	0.8	0.763	25.0	7.1				
	FCL *D1B*	1.1	0.763	25.0	7.1				
	FCL *D2*	0.7	0.381	24.9	7.4	3.81	76.35	7.63	
	CLA *D3*	3.7	0.763	24.9	6.9			(G)	
	D4								

PERFORMANCE DATA

Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time=
25	FCL *D1A*	0.6	0.777	19.4	6.7				
	FCL *D1B*	1.0	0.777	20.3	6.8				
	FCL *D2*	1.7	0.388	20.0	6.7	4.85	99.60	9.70	
	CLA *D3*	3.7	0.777	20.8	6.9			(G)	
	D4								
26	FCL *D1A*	0.6	0.795	20.8	7.3				
	FCL *D1B*	0.8	0.795	20.7	7.2				
	FCL *D2*	0.9	0.397	20.8	7.3	2.78	60.99	5.56	
	CLA *D3*	3.1	0.795	21.1	7.1			(G)	
	D4								
27	FCL *D1A*	1.0	0.809	20.9	7.3				
	FCL *D1B*	1.1	0.809	21.1	7.2				
	FCL *D2*	0.8	0.404	20.7	7.4	2.73	61.01	5.46	
	CLA *D3*	3.1	0.809	21.0	7.2			(G)	
	D4								
28	FCL *D1A*	0.6	0.794	21.8	7.1				
	FCL *D1B*	0.8	0.794	21.5	7.0				
	FCL *D2*	0.8	0.397	21.4	7.0	2.97	58.17	5.95	
	CLA *D3*	3.1	0.794	22.3	6.9			(G)	
	D4								
29	FCL *D1A*	0.5	0.775	20.7	7.2				
	FCL *D1B*	0.7	0.755	20.6	7.2				
	FCL *D2*	0.9	0.387	20.5	7.2	2.86	57.72	5.73	
	CLA *D3*	3.3	0.755	21.5	7.2			(G)	
	D4								
30	FCL *D1A*	0.3	0.730	20.1	7.3				
	FCL *D1B*	0.6	0.730	20.1	7.4				
	FCL *D2*	1.0	0.365	20.5	7.3	2.94	61.51	5.87	
	CLA *D3*	3.7	0.730	19.6	7.4			(G)	
	D4								
31	FCL *D1A*	0.6	0.777	19.0	7.2				
	FCL *D1B*	0.8	0.777	19.0	7.2				
	FCL *D2*	0.9	0.906	19.0	7.0	1.67	29.83	3.33	
	CLA *D3*	2.9	0.777	18.5	7.6			(G)	
	D4								
					Max	4.85	99.60	9.70	
					Min	1.35	16.30	2.70	
					Avg	3.04	57.58	6.09	
					SD	0.81	19.17	1.63	

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:** WS0014046, B **Date:** November 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: October

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	10/2	140	3.06	2.75	10.1	15	0.68			0.68
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	3.06	2.75	10.13		0.68			0.68
Max		140.00	3.06	2.75	10.13		0.68			0.68
Min		140.00	3.06	2.75	10.13		0.68			0.68

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	3.06	2.75	10.1	NA	0.68

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: Adolfo Vela

Certificate No. and Grade: WS0014046, B

Date: November 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 (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:** October **Year:** 2019

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	44	62.10	65.20	0.95	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	10/1/19	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 2	Previous Month's Sensor CF	1	38	44	67.50	72.40	0.93	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	10/1/19	7							
	New Sensor CF	8							
		9							
	1.00	10							
UVCD No. 3	Previous Month's Sensor CF	1	39	44	65.90	61.20	1.08	NA	1.00
		2							
		3							
	1.00	4							
	Calibration Date	5							
		6							
	10/1/19	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

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: Adolfo Vasquez

Certificate No. and Grade: WS0014046, B

Date: November 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:** October **Year:** 2019

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. 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

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. 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: Adolfo Vasquez

Certificate No. and Grade: WS0014046, B

Date: November 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:** October **Year:** 2019

VALIDATED OPERATIONAL CONDITIONS

VALIDATED PARAMETERS						PERFORMANCE REQUIREMENTS	
	Reactor Number					Crypto Log Inactivation	Required UV Dose (mJ/cm^2)
Parameters	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	0.481	0.733	85.93	0.00	1.00	0.00	0.003	0.25
	2	0.630	0.984	85.93	0.00	1.00	0.00	0.013	
	3	0.006	0.282	85.93	72.57	1.00	72.57	0.000	
	4								
	5								
2	1	0.410	0.752	84.42	0.00	1.00	0.00	0.005	0.25
	2	0.536	1.033	84.42	0.00	1.00	0.00	0.007	
	3	X	X	X	X	X	X	X	
	4								
	5								
3	1	0.377	0.696	80.14	3.37	1.00	3.37	0.000	0.000
	2	0.510	0.948	80.14	22.58	1.00	22.58	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
4	1	0.379	0.795	87.71	0.00	1.00	0.00	0.002	0.25
	2	0.503	1.108	87.71	0.00	1.00	0.00	0.012	
	3	X	X	X	X	X	X	X	
	4								
	5								
5	1	0.363	0.707	80.51	0.00	1.00	0.00	0.003	0.25
	2	0.414	0.874	80.51	0.00	1.00	0.00	0.003	
	3	X	X	X	X	X	X	X	
	4								
	5								
6	1	0.444	0.741	82.61	0.00	1.00	0.00	0.004	0.25
	2	0.491	0.815	82.61	0.00	1.00	0.00	0.005	
	3	X	X	X	X	X	X	X	
	4								
	5								
7	1	0.458	0.750	79.80	6.48	1.00	6.48	0.000	0.000
	2	0.529	0.953	79.80	17.45	1.00	17.45	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
8	1	0.413	0.746	89.03	26.59	1.00	26.59	0.000	0.000
	2	0.484	0.934	89.03	2.62	1.00	2.62	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	0.469	0.728	88.54	4.11	1.00	4.11	0.000	0.000
	2	0.577	0.942	88.54	18.18	1.00	18.18	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
10	1	0.426	0.712	84.93	0.00	1.00	0.00	0.005	0.25
	2	0.524	0.952	84.93	0.00	1.00	0.00	0.007	
	3	X	X	X	X	X	X	X	
	4								
	5								
11	1	0.420	0.878	86.39	26.09	1.00	26.09	0.000	0.000
	2	0.541	1.137	86.39	22.26	1.00	22.26	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
12	1	0.349	0.808	87.17	29.89	1.00	29.89	0.000	0.000
	2	0.449	1.056	87.17	2.77	1.00	2.77	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
13	1	0.366	0.774	91.64	2.78	1.00	2.78	0.000	0.000
	2	0.477	1.016	91.64	18.42	1.00	18.42	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
14	1	0.357	0.726	90.20	0.00	1.00	0.00	0.003	0.25
	2	0.451	0.988	90.20	0.00	1.00	0.00	0.003	
	3	X	X	X	X	X	X	X	
	4								
	5								
15	1	0.463	0.899	91.81	31.12	1.00	31.12	0.000	0.000
	2	0.590	1.174	91.81	25.96	1.00	25.96	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
16	1	0.399	0.825	89.15	5.86	1.00	5.86	0.000	0.000
	2	0.496	1.084	89.15	27.36	1.00	27.36	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								

SUBMITTED BY: Adolfo Vasquez **Certificate No. and Grade:** WS0014046, B **Date:** November 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:** October **Year:** 2019

TRUE

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

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	0.365	0.694	84.05	34.11	1.00	34.11	0.000	0.000
	2	0.464	0.857	84.05	31.85	1.00	31.85	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
18	1	0.411	0.779	91.52	31.17	1.00	31.17	0.000	0.000
	2	0.528	1.026	91.52	27.43	1.00	27.43	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
19	1	0.414	0.882	86.17	0.00	1.00	0.00	0.005	0.25
	2	0.523	1.117	86.17	0.00	1.00	0.00	0.005	
	3	X	X	X	X	X	X	X	
	4								
	5								
20	1	0.436	0.738	90.30	0.00	1.00	0.00	0.005	0.25
	2	0.550	0.953	90.30	0.00	1.00	0.00	0.006	
	3	X	X	X	X	X	X	X	
	4								
	5								
21	1	0.484	0.810	93.77	13.69	1.00	13.69	0.000	0.000
	2	0.601	1.052	93.77	29.17	1.00	29.17	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
22	1	0.455	0.727	91.47	2.15	1.00	2.15	0.007	0.25
	2	0.562	0.899	91.47	30.86	1.00	30.86	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
23	1	0.378	0.770	84.90	3.93	1.00	3.93	0.000	0.000
	2	0.468	1.045	84.90	13.83	1.00	13.83	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
24	1	0.396	0.680	89.10	36.46	1.00	36.46	0.000	0.000
	2	0.493	0.823	89.10	30.35	1.00	30.35	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							
25	1	0.341	0.718	88.57	0.00	1.00	0.00	0.003	0.25
	2	0.423	0.912	88.57	0.00	1.00	0.00	0.003	
	3	X	X	X	X	X	X	X	
	4								
	5								
26	1	0.343	0.696	77.55	37.86	1.00	37.86	0.000	0.000
	2	0.439	0.884	77.55	32.29	1.00	32.29	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
27	1	0.400	0.709	89.62	16.87	1.00	16.87	0.000	0.000
	2	0.482	0.900	89.62	31.65	1.00	31.65	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
28	1	0.393	0.733	92.72	0.00	1.00	0.00	0.006	0.25
	2	0.479	0.939	92.72	0.00	1.00	0.00	0.008	
	3	X	X	X	X	X	X	X	
	4								
	5								
29	1	0.400	0.722	88.15	0.00	1.00	0.00	0.006	0.25
	2	0.489	0.928	88.15	0.00	1.00	0.00	0.007	
	3	X	X	X	X	X	X	X	
	4								
	5								
30	1	0.375	0.707	87.74	34.78	1.00	34.78	0.000	0.000
	2	0.478	0.900	87.74	23.74	1.00	23.74	0.000	
	3	X	X	X	X	X	X	X	
	4								
	5								
31	1	0.328	0.659	87.81	0.00	1.00	0.00	0.011	0.24
	2	0.422	0.865	87.81	0.00	1.00	0.00	0.024	
	3	X	X	X	X	X	X	X	
	4								
	5								

SUBMITTED BY: Adolfo Vasquez
Certificate No. and Grade: WS0014046, B **Date:** November 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:** October **Year:** 2019

DAILY MINIMUM INACTIVATION

Reactor Range	SUMMARY DATA					Reactor Range	SUMMARY DATA				
			Inactivation Credit Achieved						Min Inactivation		
	Date	Min Dose (mJ/cm^2)	Giardia Log	Virus Log	Crypto Log		Date	Min Dose (mJ/cm^2)	Giardia Log	Virus Log	Crypto Log
1 to 3	1	0.00*	1.00	0.00	1.00	1 to 3	9	4.11	1.83	0.00	1.00
	2	0.00*	1.00	0.00	1.00		10	0.00*	1.00	0.00	1.00
	3	3.37	1.64	0.00	1.00		11	22.26	4.00	0.00	1.00
	4	0.00*	1.00	0.00	1.00		12	2.77	1.40	0.00	1.00
	5	0.00*	1.00	0.00	1.00		13	2.78	1.40	0.00	1.00
	6	0.00*	1.00	0.00	1.00		14	0.00*	1.00	0.00	1.00
	7	6.48	2.26	0.00	1.00		15	25.96	4.00	0.11	1.00
	8	2.62	1.32	0.00	1.00		16	5.86	2.13	0.00	1.00

DAILY MINIMUM INACTIVATION

Reactor Range	SUMMARY DATA					Reactor Range	SUMMARY DATA				
			Min Inactivation						Min Inactivation		
	Date	Min Dose (mJ/cm^2)	Giardia Log	Virus Log	Crypto Log		Date	Min Dose (mJ/cm^2)	Giardia Log	Virus Log	Crypto Log
1 to 3	17	31.85	4.00	0.29	1.00	1 to 3	25	0.00*	1.00	0.00	1.00
	18	27.43	4.00	0.15	1.00		26	32.29	4.00	0.30	1.00
	19	0.00*	1.00	0.00	1.00		27	16.87	3.63	0.00	1.00
	20	0.00*	1.00	0.00	1.00		28	0.00*	1.00	0.00	1.00
	21	13.69	3.34	0.00	1.00		29	0.00*	1.00	0.00	1.00
	22	2.15*	1.03	0.00	1.00		30	23.74	4.00	0.04	1.00
	23	3.93	1.79	0.00	1.00		31	0.00*	1.00	0.00	1.00
	24	30.35	4.00	0.25	1.00						

Total volume of water treated by all CDA reactors:	28.10	MG
Total volume of off-spec water produced by all CDA reactors:	0.17	MG
Percentage of off-spec water produced by all CDA reactors:	0.61	%
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: 23, 24,

SUBMITTED BY: Adolfo Vasquez

Certificate No. and Grade: WS0014046, B **Date:** November 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: October Year: 2019

NA

CALIBRATION DATA

Benchtop UVT Analyzer Serial Number: UVT-08-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	10/1/19	78713	89.20	88.40	0.80	NA	NA
	2	10/7/19	78713	91.90	92.10	0.20	NA	NA
	3	10/14/19	78713	94.50	94.30	0.20	NA	NA
	4	10/21/19	78713	94.70	94.90	0.20	NA	NA
	5	10/28/19	78713	93.60	92.30	1.30	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: UVT-08-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: WS0014046, B

Date: November 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:** October **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:** October **Year:** 2019

	GIARDIA AND CRYPTOSPORIDIUM TREATMENT CREDITS												GIARDIA INACTIVATION CREDITS						VIRAL INACTIVATION CREDITS					
	Total Daily Credit By Train						Total Daily Bin 3 & 4 Credit by Train						Total Daily Inactivation Credit By Train						Total Daily Inactivation Credit by Train					
Overall																								
Train 1	TRUE	FALSE	FALSE	FALSE	FALSE	Minimum	TRUE	FALSE	FALSE	FALSE	FALSE	Minimum	TRUE	FALSE	FALSE	FALSE	FALSE	Minimum	TRUE	FALSE	FALSE	FALSE	FALSE	Minimum
Train 2																								
Train 3																								
Train 4																								
Train 5																								
1	4.50					4.50	1.00					1.00	5.49					5.49	88.62					88.62
2	4.50					4.50	1.00					1.00	5.49					5.49	65.23					65.23
3	4.50					4.50	1.00					1.00	4.30					4.30	43.50					43.50
4	4.50					4.50	1.00					1.00	4.11					4.11	59.28					59.28
5	4.50					4.50	1.00					1.00	5.39					5.39	92.53					92.53
6	4.50					4.50	1.00					1.00	4.67					4.67	64.79					64.79
7	4.50					4.50	1.00					1.00	5.49					5.49	58.63					58.63
8	4.50					4.50	1.00					1.00	4.12					4.12	50.95					50.95
9	4.50					4.50	1.00					1.00	5.07					5.07	60.66					60.66
10	4.50					4.50	1.00					1.00	5.25					5.25	84.50					84.50
11	4.50					4.50	1.00					1.00	7.27					7.27	62.23					62.23
12	4.50					4.50	1.00					1.00	3.78					3.78	49.12					49.12
13	4.50					4.50	1.00					1.00	4.31					4.31	62.81					62.81
14	4.50					4.50	1.00					1.00	3.43					3.43	41.92					41.92
15	4.50					4.50	1.00					1.00	5.69					5.69	21.85					21.85
16	4.50					4.50	1.00					1.00	4.32					4.32	34.78					34.78
17	4.50					4.50	1.00					1.00	7.29					7.29	56.60					56.60
18	4.50					4.50	1.00					1.00	7.28					7.28	60.36					60.36
19	4.50					4.50	1.00					1.00	4.45					4.45	63.87					63.87
20	4.50					4.50	1.00					1.00	4.14					4.14	56.53					56.53
21	4.50					4.50	1.00					1.00	5.07					5.07	22.40					22.40
22	4.50					4.50	1.00					1.00	2.39					2.39	16.30					16.30
23	4.50					4.50	1.00					1.00	5.23					5.23	62.90					62.90
24	4.50					4.50	1.00					1.00	7.81					7.81	76.60					76.60
25	4.50					4.50	1.00					1.00	5.85					5.85	99.60					99.60
26	4.50					4.50	1.00					1.00	6.78					6.78	61.29					61.29
27	4.50					4.50	1.00					1.00	6.36					6.36	61.01					61.01
28	4.50					4.50	1.00					1.00	3.97					3.97	58.17					58.17
29	4.50					4.50	1.00					1.00	3.86					3.86	57.72					57.72
30	4.50					4.50	1.00					1.00	6.94					6.94	61.54					61.54
31	4.50					4.50	1.00					1.00	1.67					1.67	29.83					29.83
MIN	4.50					4.50	1.00					1.00	1.67					1.67	16.30					16.30
AVG	4.50					4.50	1.00					1.00	5.07					5.07	57.62					57.62
MAX	4.50					4.50	1.00					1.00	7.81					7.81	99.60					99.60