

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: City Of Corsicana

PLANT NAME

OR NUMBER: Lake Halbert WTP

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.

PWS ID No.: 1750002

Operator's Signature: _____

Report for

the Month of: September 2014

Certificate No. & Grade: WO0012234, A

Date: October 1, 2014

TREATMENT PLANT PERFORMANCE

Total number of turbidity readings:	<u>162</u>	Number of 4-hour periods when plant was off-line:	<u>18</u>
Number of readings above 0.10 NTU:	<u>11</u>	Number of 4-hour periods when plant was on-line but turbidity data was not collected:	<u>0</u>
Number of readings above 0.3 NTU:	<u>0</u>	Number of days when plant was on-line but individual filter turbidity data was not collected:	<u>0</u>
Number of readings above 0.5 NTU:	<u>0</u>	Number of days with readings above 1.0 NTU:	<u>0</u> (2)
Number of readings above 1.0 NTU:	<u>0</u>	Number of days with readings above 5.0 NTU:	<u>0</u> (3)
Maximum allowable turbidity level:	<u>0.3</u>		
Percentage of readings above this limit:	<u>0.0</u> % (1)		
Statistical Summary		Maximum turbidity reading:	<u>0.22</u> NTU
		Minimum turbidity reading:	<u>0.03</u> NTU
		CFE 95 th percentile value:	<u>0.12</u> NTU
		Average turbidity value:	<u>0.07</u> NTU
		Standard deviation:	<u>0.026</u> NTU
		IFE 95 th percentile:	<u>0.090</u> NTU
Number of days with a low CT for no more than 4.0 consecutive hours:	<u>0</u>	Average log inactivation for Giardia:	<u>NA</u>
Number of days with a low CT for more than 4.0 consecutive hours:	<u>0</u> (4)	Average log inactivation for viruses:	<u>NA</u>
		Number of days when profiling data was not collected:	<u>30</u>
		Number of days when CT data was not collected:	<u>0</u>
Minimum disinfectant residual required leaving the plant:	<u>0.5</u> mg/L, measured as Total Chlorine		
Number of days with a low residual for no more than 4.0 consecutive hours:	<u>0</u>		
Number of days with a low residual for more than 4.0 consecutive hours:	<u>0</u> (5)	Number of days when disinfectant residual leaving the plant was not properly monitored:	<u>0</u>

DISTRIBUTION SYSTEM

Minimum disinfectant residual required in distribution system:	<u>0.5</u> mg/L, measured as Total Chlorine		
Total number of readings this month:	<u>60</u>	(at least 30 required) (8)	
Average disinfectant residual value:	<u>2.18</u>	Percentage of readings with a low residual this month:	<u>0.0</u> % (6A)
Number of readings with a low residual:	<u>0</u>		
Number of readings with no detectable residual:	<u>0</u>	Percentage of readings with a low residual last month:	<u>0.0</u> % (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.

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: City Of Corsicana

PLANT NAME OR NUMBER: Lake Halbert WTP

PWS ID No.: 1750002

Connections: 11,015

Month: September Year: 2014

Population: 23,770

PERFORMANCE DATA																			
Date	Raw Water Pumpage (MGD)	Treated Water Pumpage (MGD)	RAW WATER ANALYSES		SETTLED WATER TURBIDITY (Optional Data)						FINISHED WATER QUALITY								
			NTU	Alk.	Basin No.						Turbidity						Lowest Residual	Time=	
					1	2	3	4	5	6	NTU1	NTU2	NTU3	NTU4	NTU5	NTU6			
1	2.430	2.396	32	95								0.09	0.09	0.08	0.07	0.07	0.08	2.9	
2	2.270	2.270	32	94								0.07	0.07	0.06	0.06	0.06	0.06	2.9	
3	1.722	1.623	13	84								0.06	0.06	0.06	0.07	0.08	0.08	2.9	
4	1.952	1.852	4	82								0.08	0.08	0.07	0.08	0.07	0.07	2.8	
5	2.263	2.263	5	85								0.06	0.06	0.05	0.05	0.05	0.05	2.9	
6	2.285	2.100	5	86								0.05	0.06	0.07	0.06	0.06	0.06	2.7	
7	2.262	2.262	4	82								0.07	0.06	0.06	0.06	0.06	0.07	3.0	
8	1.894	1.704	3	90								0.09	0.09	x	0.12	0.10	0.10	2.7	
9	2.193	2.193	21	89								x	0.15	0.14	0.15	0.08	0.07	2.7	
10	2.282	2.197	2	84								0.13	0.09	0.07	0.08	0.07	0.07	2.6	
11	2.257	2.162	2	85								0.07	0.07	0.05	0.05	0.06	0.06	2.8	
12	2.347	2.246	2	88								0.06	0.06	0.06	0.08	0.08	0.09	3.0	
13	1.401	1.298	2	87								0.11	0.06	0.12	0.14	x	x	2.9	
14	1.762	1.762	2	86								x	0.22	0.19	0.15	0.10	0.06	3.0	
15	1.895	1.808	2	84								0.06	0.05	0.04	0.06	0.06	0.06	3.0	
16	0.756	0.756	3	92								x	x	x	x	x	0.06	3.0	
17	1.929	1.822	2	90								0.06	0.04	0.04	0.03	0.08	0.06	2.9	
18	1.886	1.791	2	92								0.06	0.06	0.05	0.05	0.05	0.05	2.8	
19	1.990	1.903	3	91								0.05	0.05	0.08	0.07	x	0.05	2.5	
20	2.084	2.084	3	90								0.05	0.05	0.05	0.05	0.05	0.05	2.8	
21	1.600	1.443	2	86								0.06	0.05	0.05	0.06	0.06	0.06	2.9	
22	1.550	1.554	2	89								0.05	0.05	0.05	0.05	0.06	0.06	2.8	
23	1.712	1.525	2	91								0.05	0.05	0.05	0.04	0.08	0.08	2.9	
24	2.466	2.466	3	89								0.07	0.07	0.06	0.07	0.06	0.06	2.8	
25	1.960	1.837	4	86								0.06	0.06	0.05	x	0.06	0.06	2.8	
26	1.850	1.797	3	88								0.06	0.06	0.04	0.05	0.04	0.04	2.9	
27	1.540	1.383	3	88								x	x	0.06	0.05	0.05	0.05	2.7	
28	2.020	1.780	3	88								0.08	0.08	0.07	0.08	0.06	0.06	2.8	
29	2.230	2.229	5	90								x	x	0.07	0.06	0.06	0.07	2.8	
30	2.240	2.157	4	92								x	x	0.10	0.07	0.07	0.09	2.5	
31																			
Total	59.028	56.663																	
Avg	1.968	1.889																	
Max	2.466	2.466																	
Min	0.756	0.756																	

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: _____ Certificate No. and Grade: WO0012234, A Date: October 1, 2014

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: City Of Corsicana
PWS ID No.: 1750002

PLANT NAME
OR NUMBER: Lake Halbert WTP
Month: September Year: 2014

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																
1	0.11	x	0.14	0.14	0.09	x	0.05	x												
2	0.05	x	0.14	x	0.07	x	0.05	x												
3	0.05	x	0.05	0.05	0.05	0.05	0.04	0.03												
4	0.07	0.07	0.05	x	0.08	0.08	0.04	x												
5	0.06	x	0.05	x	0.07	x	0.03	x												
6	0.05	x	0.09	0.09	0.06	x	0.07	0.07												
7	0.06	x	0.07	x	0.06	x	0.07	x												
8	0.08	0.08	0.06	0.06	0.10	0.10	0.05	0.05												
9	0.09	0.08	0.06	0.06	0.13	0.12	0.06	0.06												
10	0.05	x	0.05	x	0.07	x	0.06	x												
11	0.09	0.09	0.08	0.08	0.06	x	0.04	x												
12	0.08	x	0.07	x	0.06	x	0.04	x												
13	0.06	x	0.06	x	0.07	0.07	0.04	x												
14	0.05	0.05	0.05	0.05	0.06	0.05	x	x												
15	0.06	0.06	0.06	x	0.06	x	0.07	0.06												
16	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05												
17	0.05	x	x	x	0.05	x	0.04	x												
18	0.06	x	0.08	x	0.08	0.07	0.05	x												
19	0.05	0.05	0.05	0.05	0.06	0.06	0.04	0.04												
20	0.06	x	0.06	x	0.06	x	0.05	x												
21	0.06	x	x	x	0.06	x	0.05	x												
22	0.05	x	x	x	0.06	x	0.04	x												
23	0.05	x	0.08	0.08	0.09	0.09	0.04	x												
24	0.05	0.05	0.08	x	0.08	x	0.04	x												
25	0.07	x	0.06	0.06	0.06	0.06	0.06	x												
26	0.04	0.04	0.05	x	0.06	x	x	x												
27	0.05	0.04	0.05	0.05	0.05	0.05	0.08	0.07												
28	0.06	0.05	0.07	0.07	0.08	0.08	0.08	x												
29	0.08	0.07	0.07	0.07	0.07	0.07	0.05	0.05												
30	0.07	0.06	0.06	0.06	0.06	0.06	0.05	0.05												
31																				

SUMMARY & COMPLIANCE ACTIONS	Criteria	Filter No.										Plant									
		1	2	3	4	5	6	7	8	9	10										
Number of days with event(s) above 0.5 NTU at 4.0 hrs this month	0	0	0	0	0																
Number of days with event(s) above 1.0 NTU this month	0	0	0	0	0																
Number of days with event(s) above 1.0 NTU last month	0	0	0	0	0																
Number of days with event(s) above 1.0 NTU two months ago	0	0	0	0	0																
Total number of days with event(s) above 1.0 NTU in three months	0	0	0	0	0																
Number of days with event(s) above 2.0 NTU this month												0									
Number of days with event(s) above 2.0 NTU last month												0									
Does the filter/plant have an approved Corrective Action Plan?	N	N	N	N	N																N
Is the plant required to submit a Filter Profile Report?	N	N	N	N	N																
Is the plant required to submit a Filter Assessment Report?	N	N	N	N	N																
Is the plant required to submit a Request for Compliance CPE?												N									

SUBMITTED BY: _____ Certificate No. _____ and Grade: WO0012234, A Date: October 1, 2014

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: City Of Corsicana
PWS ID No.: 1750002

PLANT NAME OR NUMBER: Lake Halbert WTP
Month: September Year: 2014

DISINFECTION PROCESS PARAMETERS									
APPROVED CT STUDY PARAMETERS					PERFORMANCE STANDARDS				
Parameters	Disinfection Zones					Log Inactivations			
	D1	D2	D3	D4	D5	Giardia lamblia Cysts		Viruses	
Flow Rate (MGD)	4.000	4.000	4.000			0.5		2.0	
T ₁₀ (minutes)	78.3	15.1	9.0						

PERFORMANCE DATA									
DISINFECTION PROCESS DATA									
Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time=
1	FCL D1								
	FCL D2	0.9	3.000	29.0	6.7				
	CLA D3	3.0	3.000	29.0	7.4	2.31*	50.45*	4.62	
	D4							(G)	
	D5								
2	FCL D1								
	FCL D2	0.9	2.200	29.0	6.7				
	CLA D3	3.0	2.200	29.0	7.6	3.15*	68.80*	6.30	
	D4							(G)	
	D5								
3	FCL D1								
	FCL D2	0.7	2.200	29.0	6.6				
	CLA D3	3.1	2.200	29.0	7.4	2.63*	53.66*	5.27	
	D4							(G)	
	D5								
4	FCL D1								
	FCL D2	0.8	2.200	27.0	6.6				
	CLA D3	2.9	2.200	27.0	7.7	2.58*	53.28*	5.17	
	D4							(G)	
	D5								
5	FCL D1								
	FCL D2	0.9	2.200	28.0	6.6				
	CLA D3	3.0	2.200	28.0	7.4	3.05*	64.19*	6.11	
	D4							(G)	
	D5								
6	FCL D1								
	FCL D2	0.9	2.200	28.0	6.7				
	CLA D3	3.0	2.200	28.0	7.4	2.95*	64.19*	5.91	
	D4							(G)	
	D5								
7	FCL D1								
	FCL D2	0.8	2.200	28.0	6.7				
	CLA D3	3.1	2.200	28.0	7.5	2.68*	57.14*	5.36	
	D4							(G)	
	D5								
8	FCL D1								
	FCL D2	0.6	2.200	28.0	6.7				
	CLA D3	2.7	2.200	28.0	7.5	2.07*	42.92*	4.14	
	D4							(G)	
	D5								

PERFORMANCE DATA									
DISINFECTION PROCESS DATA									
Date	Disinfectant	C (mg/L)	Flow (MGD)	Temp (°C)	pH	Giardia Log	Virus Log	Inact. Ratio	Time=
9	FCL D1								
	FCL D2	0.8	2.200	28.0	6.8				
	CLA D3	3.0	2.200	29.0	7.4	2.58*	57.16*	5.17	
	D4							(G)	
	D5								
10	FCL D1								
	FCL D2	0.7	2.200	29.0	6.6				
	CLA D3	2.6	2.200	29.0	7.4	2.60*	53.56*	5.20	
	D4							(G)	
	D5								
11	FCL D1								
	FCL D2	1.0	2.200	28.0	6.7				
	CLA D3	2.9	2.200	28.0	7.7	3.22*	71.24*	6.44	
	D4							(G)	
	D5								
12	FCL D1								
	FCL D2	0.8	2.200	28.0	6.7				
	CLA D3	3.1	2.200	28.0	7.3	2.68*	57.14*	5.36	
	D4							(G)	
	D5								
13	FCL D1								
	FCL D2	0.8	2.200	28.0	6.7				
	CLA D3	3.3	2.200	28.0	7.3	2.69*	57.18*	5.38	
	D4							(G)	
	D5								
14	FCL D1								
	FCL D2	0.8	1.800	27.0	6.7				
	CLA D3	3.0	1.800	27.0	7.3	3.06*	65.14*	6.12	
	D4							(G)	
	D5								
15	FCL D1								
	FCL D2	1.3	2.200	27.0	6.7				
	CLA D3	3.4	2.200	27.0	7.6	3.79*	86.34*	7.58	
	D4							(G)	
	D5								
16	FCL D1								
	FCL D2	0.7	2.200	27.0	6.7				
	CLA D3	3.0	2.200	27.0	7.6	2.24*	46.70*	4.48	
	D4							(G)	
	D5								

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

* Not representative of total log inactivation(s) and/or total inactivation ratio for all disinfection zones; Excluded from statistical summary calculations.

SUBMITTED BY: _____ Certificate No. and Grade: WO0012234, A Date: October 1, 2014

MONTHLY TOTAL ORGANIC CARBON REMOVAL REPORT (TOCMOR)

FOR SURFACE WATER OR GROUND WATER UNDER THE INFLUENCE OF SURFACE WATER SYSTEMS

PUBLIC WATER SYSTEM NAME: City Of Corsicana
 PWS ID No.: 1750002
 Type of treatment: Conventional Unconventional explain: _____

PLANT NAME OR NUMBER: Lake Halbert WTP
 Month: September Year: 2014

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		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	
1	9/2	94	7.01	5.05	28.0	35	0.80			0.80
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		93.50	7.01	5.05	27.96		0.80			0.80
Max		93.50	7.01	5.05	27.96		0.80			0.80
Min		93.50	7.01	5.05	27.96		0.80			0.80

TOTAL ORGANIC CARBON (TOC) REMOVAL SUMMARY

TOC Summary: Don't forget to include a copy of your P.7-TOC ACC worksheet with your report.					Monthly Compliance Ratio
Raw Water Alkalinity	Raw Water TOC	Treated Water TOC	TOC % Removal	ACC # used	
94	7.01	5.05	28.0	5 Mo. Avg	1.00

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: WO0012234, A Date: October 1, 2014

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

TOC ALTERNATIVE COMPLIANCE CRITERIA REPORT
 FOR SURFACE WATER OR GROUND WATER UNDER THE INFLUENCE OF SURFACE WATER SYSTEMS

PUBLIC WATER SYSTEM NAME: City Of Corsicana
 PWS ID No.: 1750002

PLANT NAME OR NUMBER: Lake Halbert WTP
 Month: September Year: 2014

This Alternative Compliance Criteria (ACC) Report is being submitted to request the following ACC: (check one)
 (Before you can begin entering data, you must put an "X" in the box that shows the number of the Alternative Compliance Criteria you are applying for.)

#1 #2 #3 #4 #5 #6 #7 #8

ACC #1

ACC #2

ACC #3

ACC #4

ACC #5	Source water SUVA less than or equal to 2.0 L/mg-m? (either based on most recent month's data OR calculated quarterly as a running annual average) (Source water SUVA is the dissolved organic carbon concentration divided by the ultraviolet light absorption at 254 nanometers in the source water before any treatment of any kind. Measure monthly.)
	Current Month SUVA
	1.68

ACC #6

ACC #7

ACC #8

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: WO0012234, A Date: October 1, 2014

STEP 2 JAR TEST REPORT

FOR SURFACE WATER OR GROUND WATER UNDER THE INFLUENCE OF SURFACE WATER SYSTEMS

PUBLIC WATER SYSTEM NAME: City Of Corsicana
 PWS ID No.: 1750002

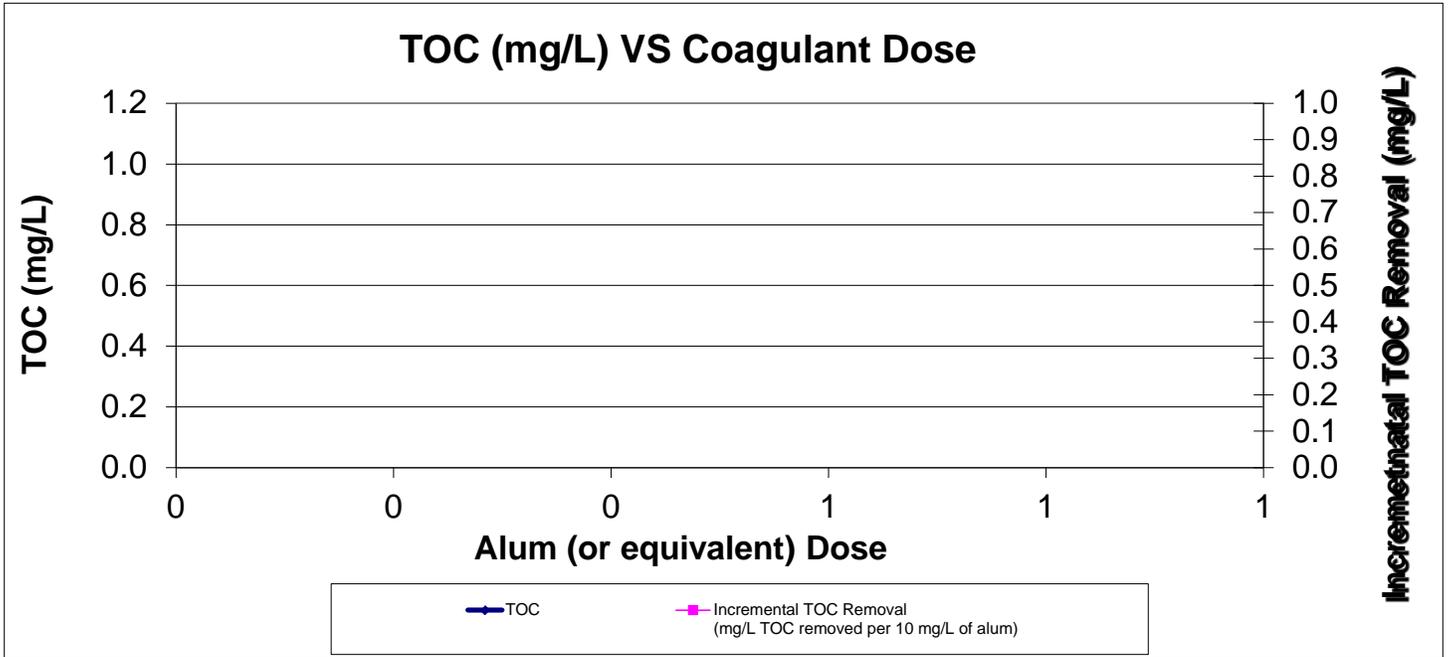
PLANT NAME OR NUMBER: Lake Halbert WTP
 DATE OF JAR TEST: _____

PLANT CONDITIONS								
RAW WATER SOURCE(s)	COAGULANT		COAGULANT AID		FLOC AID		pH ADJUSTMENT	
	Type	Dose (mg/L)	Type	Dose (mg/L)	Type	Dose (mg/L)	Type	Dose (mg/L)

STEP 2 JAR TEST PARAMETERS									
COAGULANT		BASE		JAR SIZE	JAR TEST CONDITIONS				
Type	Stock Solution Concentration (g/L)	Type	Stock Solution Concentration (g/L)	Volume (liters)	Rapid Mix		Flocculation		Settling
					Speed (rpm)	Duration (minutes)	Speed (rpm)	Duration (minutes)	Duration (minutes)

JAR TEST RESULTS									
Jar No.	COAGULANT		BASE		Alkalinity (mg/L as CaCO ₃)	pH	TOC (mg/L)	Incremental TOC Removal (mg/L TOC removed per 10 mg/L of alum)	Cumulative TOC Removal (%)
	Dose (Alum eq.) (mg/L)	Volume (mL)	Dose (mg/L)	Volume (mL)					
RAW									
1					Target pH (based on raw water alkalinity)				
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									

Has the TCEQ approved this source as "Not Amenable" to Treatment even though Target pH was not reached? If "yes", provide the date of the TCEQ letter or e-mail.	TOC, % Removal at Apparent PODR:
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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: WO0012234, A