

# 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: 10,890

Month: April Year: 2013

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	1.020	0.895	29	108								0.10	0.11	0.10	0.10	x	x	2.6	
2	0.000	0.000	X	X	X	X						X	X	X	X	X	X	X	
3	1.360	1.172	30	107								0.14	0.16	0.19	0.20	0.15	0.13	2.6	
4	1.170	1.170	28	108								0.12	0.11	0.10	0.09	0.09	0.10	3.4	
5	1.180	1.049	28	107		0.3						0.10	0.09	0.13	0.13	x	0.12	3.3	
6	0.970	0.950	31	106								0.12	0.12	x	x	x	0.11	3.1	
7	0.980	0.976	30	106								x	x	x	0.12	0.10	0.10	2.4	
8	0.430	0.382	26	106								0.10	0.10	x	x	x	x	3.7	
9	0.610	0.610	31	108								x	x	x	x	0.15	0.16	2.6	
10	1.020	0.915	36	106								0.19	0.11	x	x	x	0.11	3.2	
11	1.010	0.898	43	107								0.11	0.10	x	x	0.11	0.10	3.0	
12	1.180	1.180	34	107								0.11	0.10	0.08	x	0.10	0.11	3.4	
13	1.170	1.130	35	109								0.11	0.10	0.14	0.12	0.12	0.11	3.3	
14	1.100	1.066	38	107								0.12	0.11	0.11	0.11	0.11	0.10	3.5	
15	1.050	0.594	28	107								x	x	x	x	0.12	0.12	3.0	
16	1.510	0.506	26	108								0.12	0.10	x	x	x	0.12	2.5	
17	1.670	1.378	29	109								0.12	0.11	0.09	0.09	0.09	0.09	3.5	
18	1.670	1.670	27	107								0.10	0.10	0.10	0.15	0.11	0.10	3.4	
19	1.530	1.487	30	109								0.10	0.10	0.08	0.08	0.08	0.08	3.2	
20	1.170	1.170	31	111								x	x	0.10	0.09	0.09	0.09	3.0	
21	1.050	0.936	26	110								0.09	0.09	0.09	0.09	x	x	3.4	
22	1.240	1.140	32	109								x	x	0.11	0.10	0.10	0.10	3.4	
23	1.670	1.670	27	109								0.11	0.10	0.10	0.10	0.10	0.10	3.3	
24	1.670	1.585	34	110								0.11	0.10	0.09	0.09	0.14	0.10	3.4	
25	1.670	1.505	35	111								0.12	0.11	0.10	0.11	0.11	0.11	3.4	
26	1.670	1.625	33	109								0.11	0.11	0.10	0.10	0.10	0.09	3.5	
27	1.030	1.022	38	109								0.10	0.10	x	x	x	0.10	3.1	
28	1.670	1.594	35	112								0.11	0.10	0.10	0.09	0.09	0.10	3.3	
29	1.670	1.670	35	113								0.11	0.10	0.09	0.09	0.09	0.09	3.2	
30	1.670	1.649	34	114								0.10	0.10	0.08	0.08	0.07	0.07	3.2	
31																			
<b>Total</b>	36.810	33.594																	
<b>Avg</b>	1.227	1.120																	
<b>Max</b>	1.670	1.670																	
<b>Min</b>	0.000	0.000																	

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: May 1, 2013

# 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  
Report for  
the Month of: April 2013

Operator's Signature: \_\_\_\_\_  
Certificate No. & Grade: WO0012234, A Date: May 1, 2013

## TREATMENT PLANT PERFORMANCE

Total number of turbidity readings:	<u>135</u>	Number of 4-hour periods when plant was off-line:	<u>45</u>
Number of readings above 0.10 NTU:	<u>56</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)		
<b>Statistical Summary</b>		Maximum turbidity reading:	<u>0.20</u> NTU
		Minimum turbidity reading:	<u>0.07</u> NTU
		CFE 95 <sup>th</sup> percentile value:	<u>0.15</u> NTU
		Average turbidity value:	<u>0.11</u> NTU
		Standard deviation:	<u>0.021</u> NTU
		IFE 95 <sup>th</sup> percentile:	<u>0.150</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>29</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>2.52</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.)

*Filter Data Page*

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

PLANT NAME  
OR NUMBER: Lake Halbert WTP  
Month: April Year: 2013

## 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	0.13	0.13	0.10	x	x	x	x	0.13	x											
2	X	X	X	X	X	X	X	X	X											
3	0.13	0.13	0.15	0.15	x	x	0.15	0.14												
4	0.09	x	0.12	x	x	x	x	x												
5	x	x	0.12	x	x	x	0.22	0.22												
6	x	x	0.06	0.06	0.14	0.14	0.09	0.09												
7	0.12	0.12	x	x	0.12	0.12	0.11	0.10												
8	0.10	x	x	x	0.12	x	0.11	x												
9	0.11	0.11	x	x	0.10	0.10	0.14	0.14												
10	0.10	0.10	x	x	0.10	0.10	0.15	0.15												
11	0.10	0.09	x	x	0.12	0.11	0.13	x												
12	0.09	x	x	x	0.13	x	0.09	0.06												
13	x	x	0.15	0.15	x	x	0.10	x												
14	x	x	0.10	x	x	x	0.08	x												
15	0.07	0.07	0.07	0.07	x	x	0.04	0.04												
16	0.08	x	0.06	x	0.11	0.11	0.04	0.04												
17	x	x	x	x	0.09	x	0.04	x												
18	x	x	x	x	0.12	x	0.05	x												
19	x	x	x	x	0.11	x	0.06	x												
20	x	x	x	x	0.10	0.10	0.07	0.05												
21	0.13	0.13	0.12	0.12	x	x	x	x												
22	0.12	0.12	0.11	0.11	x	x	x	x												
23	0.12	x	0.10	x	x	x	x	x												
24	0.14	x	0.10	x	x	x	x	x												
25	x	x	0.10	x	0.12	0.12	0.12	0.10												
26	x	x	x	x	0.13	x	0.12	x												
27	x	x	x	x	0.10	0.10	0.06	0.06												
28	x	x	0.13	0.12	0.10	x	0.09	x												
29	x	x	0.12	x	x	x	0.09	x												
30	x	x	0.10	x	x	x	0.10	x												
31																				

SUMMARY & COMPLIANCE ACTIONS	Filter No.											Plant										
	Criteria												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																	
	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 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
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: \_\_\_\_\_ Certificate No. \_\_\_\_\_ and Grade: WO0012234, A Date: May 1, 2013

# 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: April Year: 2013

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 <sub>10</sub> (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	1.3	1.700	17.0	6.8				
	CLA D3	3.9	1.700	16.0	7.8	2.41*	55.90*	4.81	
	D4							(G)	
	D5								
2	NA D1								
	NA D2								
	NA D3					NA	NA	NA	
	D4								
	D5								
3	FCL D1								
	FCL D2	1.3	1.700	17.0	6.7				
	CLA D3	3.1	1.700	17.0	8.6	2.46*	55.84*	4.92	
	D4							(G)	
	D5								
4	FCL D1								
	FCL D2	1.3	1.200	17.0	6.7				
	CLA D3	3.8	1.200	17.0	7.6	3.53*	79.21*	7.07	
	D4							(G)	
	D5								
5	FCL D1								
	FCL D2	1.3	1.200	16.0	6.7				
	CLA D3	3.4	1.200	16.0	7.3	3.27*	73.85*	6.55	
	D4							(G)	
	D5								
6	FCL D1								
	FCL D2	1.9	2.400	16.0	6.7				
	CLA D3	3.1	2.400	16.0	7.3	2.20*	53.83*	4.41	
	D4							(G)	
	D5								
7	FCL D1								
	FCL D2	1.2	1.700	16.0	6.7				
	CLA D3	2.4	1.700	16.0	7.4	2.12*	48.04*	4.24	
	D4							(G)	
	D5								
8	FCL D1								
	FCL D2	1.4	1.700	17.0	6.7				
	CLA D3	3.8	1.700	18.0	7.5	2.66*	60.21*	5.31	
	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	1.2	1.700	16.0	6.7				
	CLA D3	2.6	1.700	16.0	7.4	2.13*	48.06*	4.26	
	D4							(G)	
	D5								
10	FCL D1								
	FCL D2	1.3	1.700	18.0	6.7				
	CLA D3	3.4	1.700	19.0	7.5	2.66*	59.91*	5.32	
	D4							(G)	
	D5								
11	FCL D1								
	FCL D2	1.4	1.700	17.0	6.7				
	CLA D3	3.4	1.700	17.0	7.5	2.63*	60.14*	5.25	
	D4							(G)	
	D5								
12	FCL D1								
	FCL D2	1.2	1.200	17.0	6.7				
	CLA D3	3.9	1.200	17.0	7.3	3.32*	73.18*	6.64	
	D4							(G)	
	D5								
13	FCL D1								
	FCL D2	1.5	1.200	17.0	6.7				
	CLA D3	3.9	1.200	17.0	7.5	3.97*	91.32*	7.94	
	D4							(G)	
	D5								
14	FCL D1								
	FCL D2	1.2	1.200	17.0	6.7				
	CLA D3	3.5	1.200	18.0	7.6	3.30*	73.16*	6.61	
	D4							(G)	
	D5								
15	FCL D1								
	FCL D2	1.2	1.700	19.0	6.7				
	CLA D3	3.4	1.700	19.0	7.3	2.66*	59.27*	5.32	
	D4							(G)	
	D5								
16	FCL D1								
	FCL D2	1.2	1.700	20.0	6.7				
	CLA D3	3.4	1.700	21.0	7.4	2.86*	63.56*	5.72	
	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: \_\_\_\_\_ and Grade: WO0012234, A Certificate No. \_\_\_\_\_ Date: May 1, 2013



# 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

PLANT NAME OR NUMBER: Lake Halbert WTP  
 Month: April Year: 2013

Type of treatment:  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		COMPLIANCE REMOVAL RATIO
		Raw Alkalinity	Raw TOC	Treated TOC				Step 2 Required % Removal	Step 2 Removal Ratio	
		Enter the Sample Set results						<i>calculated</i>	<i>calculated from matrix</i>	
1	4/1	115	5.94	4.32	27.3	35	0.78			0.78
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
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20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
<b>Avg</b>		115.00	5.94	4.32	27.27		0.78			0.78
<b>Max</b>		115.00	5.94	4.32	27.27		0.78			0.78
<b>Min</b>		115.00	5.94	4.32	27.27		0.78			0.78

### TOTAL ORGANIC CARBON (TOC) REMOVAL SUMMARY

<b>TOC Summary: Don't forget to include a copy of your P.7-TOC ACC worksheet with your report.</b>					<b>Monthly Compliance Ratio</b>
Raw Water Alkalinity	Raw Water TOC	Treated Water TOC	TOC % Removal	ACC # used	
115	5.94	4.32	27.3	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: May 1, 2013

**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: April Year: 2013

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	<b>Source water SUVA less than or equal to 2.0 L/mg-m?</b> (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
	1.90

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: May 1, 2013

# 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

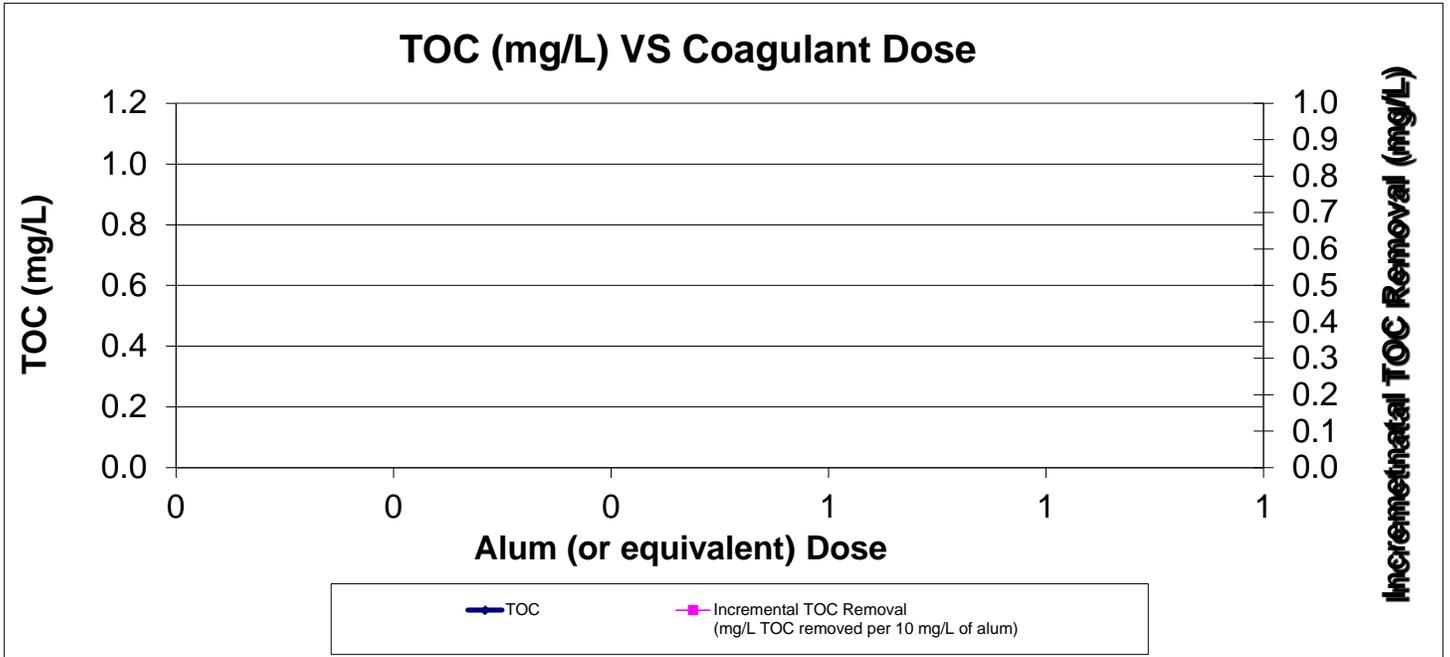
PLANT NAME OR NUMBER: Lake Halbert WTP  
 DATE OF JAR TEST: \_\_\_\_\_

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 <sub>3</sub> )	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									
2									
3									
4									
5					Target pH (based on raw water alkalinity)				
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