

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION DIVISION OF WATER RESOURCES, WATER SUPPLY SECTION

FEB 1 3 2024

Total Organic Carbon (TOC) and Enhanced Coagulation Report

PWSID# POINT	PUBLIC WATER SYSTEM NAME AND ADDRESS Vingeton Weter Department
0 0 0 0 3 6 0 A	Kingston Water Department
REPORTING PERIOD START DATE END DATE	900 Waterford Place
010124 123124	Kingston, TN 37763

TOC and Enhanced Coagulation Calculations

ĺ	A Treated Water			B Source Wat	er	С	D	E	Alternative	F
Sample Date	тос	Magnesium Hardness (as CaCO3)	тос	Alkalinity	Magnesium Hardness (as CaCO3)	Reduction of TOC as a Percent	Required TOC Removal (%)	Column C Divided by Column D	Compliance Criteria Used	
										-
										Sum of
										Column E
										Divided by the
										Number of
										Paired Sample
										Or
										Alternative
										Compliance
										Value
Average										
			Paired Sam	plea		(1-A/B) x 100	(See TOC Removal table on back of form)			Compliance achieved if value >= 1.0

I certify that U.S	i.E.P.A. approved method	is were t	sed to co	nduct TOC analysis perfor	med by: Pa	ace Analytical	/ ESC Labs	, an	d that this	document	t and all
attachments we	re prepared by me, or unc	der my di	rection or	supervision. The submitte	d information is t	o the best of my kno	wledge and beli	ef, true, ar	curate, ar	nd complet	e. I am
aware that then	are significant penalties	for subn	nitting fals	e information, including the	possibility of fin-	e and imprisonment	. As specified in	1 Tenness	ee Code /	Annotated	Section
39-16-702(a)(4)	, this declaration is made	under pe	nalty of po	erjury.							
DDEDADED BY	John M. Poole	DATE	02/06/24	PHONE: (865) 376-7187	ADDROLED BY	John M. Po	ole DATE	02/06/24	DHONE: /	865 3376-7	7187

TOC and Enhanced Coagulation Monthly Calculations

Month *	Compliance Value from Column F
Current	
Previous	
3 rd	
4 th	
5 th	
6 th	
7 th	
8 th	
9 th	
10 th	
11 th	
12 th	
Total	
Total divided by 12	

Current month compliance value, previous month value, and continuing back for previous 12 months.

Has system maintained compliance for the last 12 months? (Total divided by 12 must be greater than or equal to 1.0) Y or N

TOC and Enhanced Coagulation Quarterly Calculations

Quarter*	Compliance Value from Coumn F
Current	
Previous	
3 rd	
4 th	
Total	
Total divided by 4	

^{*} Current quarter compliance value, previous quarter value, and continuing back for previous 4 quarters.

Has system maintained compliance for the last four quarters? (Total divided by 4 must be greater than or equal to 1.0) A Y or N

Required Percentage of TOC Removal

Source Water TOC (mg/L)	Source Water Alkalinity, mg/L as CaCO3				
	0-60 mg/L	>60-120 mg/L	>120 mg/L *		
>2.0 - 4.0	35.0%	25.0%	15.0%		
>4.0 - 8.0	45.0%	35.0%	25.0%		
>8.0	50.0%	40.0%	30.0%		

^{*} Systems practicing softening must meet the TOC removal requirements in this column.

Monthly Alternative Compliance Criteria **

Subrule	Criteria
.36(9)(c)(2)(i)	Treated or Source water TOC < 2.0 mg/L.
.38(9)(0)(2)(#)	Softening System removing at least 10 mg/L of magnesium hardness.
.36(9)(c)(2)(ii)	Source water SUVA prior to treatment <= 2.0 L/mg-m.
.36(9)(o)(2)(iv)	Finished water SUVA prior to treatment <= 2.0 L/mg-m.
.38(9)(c)(2)(v)	Enhanced Softening which lowers atkalinity below 60 mg/L.

Systems meeting at least one of the conditions in paragraph (9)(c)2(i)-(v) may easign a monthly value of 1.0 in lieu of the value calculated in paragraph (9)(c)1.

Annual Alternative Compliance Criteria (1)(2)

Subrule	Criteria
.36(9)(a)(2)(i)	Running annual average of source water TOC < 2.0 mg/L.
.36(9)(a)(2)(ii)	Running annual average of treated water TOC < 2.0 mg/L calculated quarterly.
.36(9) (a)(2)(iii)	Running annual average of source water TOC < 4,0 mg/L calculated quarterly, and;
	Running annual average of source water alkalinity > 60 mg/L, calculated quarterly, and;
	Running annual average of Total Trihatomethanes <= 0.040 mg/L, or,
	Running annual average of Total Haloacetic Acids <= 0.030 mg/L.
.38(9) (a)(2)(iv)	Running annual average of Total Trihalomethanes <= 0.040 mg/L, and
	Running annual everage of Total Haloscotic Acids<= 0.030 mg/L, and,
	Only chlorine used as a primary disinfectant.
.36(9) (n)(2)(v)	Running annual average of source water SUVA <= 2.0 L/mg-m measured monthly and calculated quarterly.
.36(9) (a)(2)(vi)	Running annual average of treated water SUVA < 2.0 L/mg-m measured monthly and calculated quarterly.
.36(9) (a)(3)(1)	Softening treatment that result in a running annual average of treated water alkalinity < 60 mg/L (as CaCO3) measured monthly, and calculated quarterly as an annual running average.
.36(9) (n)(3)(ii)	Softening treatment that results in removing at least 10 mg/L of magnesium hardness (as CaCO3) measured monthly and calculated quarterly as an annual running average.

Notes

- (1) Systems meeting at least one of the conditions in paragraph (9)(s)2(i)-(iv) are not required to operate with enhanced coagulation.
- (2) Softening systems meeting one of the alternative compliance criteria in paragraph (B)(a)3 are not required to operate with enhanced coagulation.