

DBP Precursor Form 4
ACTUAL REMOVAL RATIOS for Enhanced Coagulation and Softening Treatment Plants

PWSID #: _____ **SYSTEM NAME:** _____ **DATE:** _____

TREATMENT PLANT NAME: _____ **TREATMENT PLANT ID #:** _____

AUTHORIZED SIGNATURE: _____ **SIGNATORY'S TITLE:** _____

PREPARED BY: _____ **PREPARER'S TITLE:** _____ **PHONE NUMBER:** _____

Check One: 1st Quarter 2nd Quarter 3rd Quarter 4th Quarter **YEAR: 20** __ __ **VIOLATION?:**

(Due by April 10th) (Due by July 10th) (Due by Oct. 10th) (Due by Jan. 10th)

Month of Quarter	A	B	C	D	E	F	G	H	I	J	K	L	M
	Source Water Alk. (mg/L)	Source Water TOC (mg/l)	Source SUVA	Treated Alkalinity (mg/L)	Treated TOC (mg/l)	Treated SUVA	Magnesium Hardness Removed (mg/L as CaCO ₃)	Actual % TOC Removed	Required % TOC Removed	TOC Removal Ratio	Eligible for Compliance Substitution?	Compliance Factor	Calculation of Running Annual Average of TOC using Monthly Compliance Factors
1													January:
													February:
													March:
													April:
													May:
Monthly AVERAGE												M1=	June:
2													July:
													August:
													September:
													October:
													November:
Monthly AVERAGE												M2=	December:
3													RAA:
Monthly AVERAGE												M3=	

Instructions on Reverse

Instructions For Completing DBP Precursor Form 4

Disinfection ByProduct Precursor Removal Compliance Reporting ACTUAL REMOVAL RATIOS for Enhanced Coagulation and Softening Treatment Plants

1. **PWSID#:** Enter the Public Water System (PWS) ID number assigned by USEPA.
2. **System Name:** Enter the system legal name provided to USEPA when PWSID assigned.
3. **Date:** Enter the date that the final report is prepared and signed.
4. **Treatment Plant:** Enter the name of the treatment plant from which these results are associated. Be sure name is consistent with treatment plant name in the monitoring plan.
5. **Treatment Plant ID#:** The treatment plant identification number.
6. **Authorized Signature:** The person that signs the form must be the legal owner or authorized representative of the legal owner. This signature certifies that the information submitted is correct and consistent with the written monitoring plan.
7. **Signatory Title:** The title of the owner or authorized representative of the legal owner.
8. **Prepared by:** **Print** the name of the person completing this form.
9. **Preparer's Title:** The title of the person completing this form.
10. **Phone Number:** Complete phone number of person preparing this form.
11. **Check:** the quarter that this report covers. Quarter 1 –January, February, and March; Quarter 2–April, May, and June; Quarter 3–July, August, and September; and Quarter 4–October, November, and December.
12. **Year:** Enter the last 2 digits of the year for the reporting quarter.
13. **Violation:** If the Calculated Running Annual Average of TOC removal % is less than 1.00, check box.

All Systems must complete Columns A, B, and E.

14. **Column A:** Enter the measured value for the source water alkalinity in mg/L (as CaCO₃) for each paired sampling event.
15. **Column B:** Enter the measured value for the source water TOC in mg/L for each paired sampling event.
16. **Column C:** For systems that monitor source water SUVA to be able to assign a removal ratio, enter the measured value of the source water SUVA. This sample must be collected at the same time as the source alkalinity and associated paired TOC samples.
17. **Column D:** This column will only be used for softening systems. Softening systems that monitor treated water alkalinity to be able to assign a removal ratio, enter the measured value of the treated water alkalinity. This sample must be collected at the same time as the source alkalinity and associated paired TOC samples.
18. **Column E:** Enter the measured value for the treated water TOC in mg/L for each paired sampling event.
19. **Column F:** For systems that monitor treated water SUVA to be able to assign a removal ratio, enter the measured value of the treated water SUVA. This sample must be collected at the same time as the source alkalinity and associated paired TOC samples.
20. **Column G:** For softening systems that monitor magnesium hardness removed to be able to assign a removal ratio, enter the measured value of the magnesium hardness removed in mg/L as CaCO₃. This sample must be collected at the same time as the source alkalinity and associated paired TOC samples.
21. **Column H:** Enter the actual % of TOC removed using the results of the paired source and treated water TOC as entered in columns B and E for each paired sampling event, equal to $(1 - (\text{treated water TOC} / \text{source water TOC})) \times 100$. **Note: This calculation could result in a negative number in instances where the treated water TOC sample result is higher than the source water TOC sample result.**
22. **Column I:** Enter the required TOC percent removal as determined by using the results of source water alkalinity and TOC using the 3 x 3 Table of 40CFR141.135(b)(2).
23. **Column J:** Enter the TOC removal ratio determined by dividing the actual percentage of TOC removed (Column H) by the required TOC removal percentage (Column I). **Note: This calculation would also result in a negative number if the value recorded in Column H were negative. If the calculation results in a negative number, the system must record the negative number as the actual removal ratio in this Column.**
24. **Column K:** If the value entered in Column J is less than 1.00, the system did not remove sufficient TOC. However, the system may assign a removal ratio of 1.0 for an individual sampling event if, for that sampling event, the system can demonstrate through monitoring results that the system was eligible for a compliance substitution (See 40CFR141.135(c)(2)). If the system can demonstrate that it meets one or more of these criteria, enter “yes” in column K. If the system cannot demonstrate that it met the criteria to allow it to assign a removal ratio of 1.0, enter “no” in Column K and enter into Column L the actual removal ratio calculated in Column J.
25. **Column L:** Enter either the actual removal ratio from Column J or assign a removal ratio of 1.0 if the system was eligible to enter “yes” in Column K. If a system was eligible to enter “yes” in Column K, they do not have to assign a removal ratio of 1.0 if the actual removal ratio in Column J was greater than 1.00. In the event that the treatment plant takes more than one sample per month, average the compliance factors obtained for each paired sampling event for the month and enter this value in the monthly average row and in Column M for the month for which the monitoring was performed. In any month that the treatment plant does not operate, enter “PO” in lieu of a compliance factor.
26. **Column M:** At the end of each quarter, calculate the running annual average of TOC removed using the monthly compliance factors determined as described in the above paragraphs for the previous 12 consecutive months. In the event that “PO” is entered for any monthly compliance ratio, disregard the associated month and calculate the running annual average over the previous 12 consecutive months using only the months where a compliance factor was determined. For example, if the plant operated for any 10 of the last 12 most recent consecutive months, add the compliance factors for the 10 months that the plant was in operation and divide the result by 10. This is the running annual average. If the running annual average of actual TOC percent removal as determined above is less than 1.0, the system is not in compliance and must check the violation box at the top of this form.