



**Surface Water System Monthly Operation Report
Water Production Log
Bureau of Water**

System Name:	System Number:	For (Month/Yr):
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Plant Name:	Plant Id #:	Capacity (MGD):
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Day	Name and Grade of Operator-In-Charge			Hours in Operation	Water Pumped (MG)		Peak Hourly Flow Rate (MGD)
	1st Shift	2nd Shift	3rd Shift		Raw	Finished	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
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20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							

Total			
Average			
Maximum			
Minimum			

Prepared by: _____ Date: _____
(signature)

South Carolina Department of Health and Environmental Control
Bureau of Water
Surface Water Supply Monthly Report
Water Production Log

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested, by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM BY ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

Month/Year: Month and year for which the report is being made.

Plant Name: Name of the surface water treatment plant.

Plant ID #: Enter the identification number assigned to the surface water treatment plant by DHEC's Bureau of Water.

Plant Capacity: Enter the plant rated capacity in million gallons per day.

Operator-in-Charge: Enter the name and grade of the operator on duty and responsible for the operation of the plant for each shift the plant is in operation.

Hours In Operation: Enter the numbers of hours (to the nearest half-hour) the plant was in operation for the day (i.e. filtering water).

Water Pumped: Enter, in million gallon units (to 3 decimal places), the amount of raw and finished water pumped.

Peak Hourly Flow Rate: Enter the peak rate that water is being produced (i.e. filtered). This rate should not exceed the permitted filtration capacity of the plant. (Units in MGD).

Total, Average, Maximum, & Minimum: Compute the required information.

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C.DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The public water system must keep a copy of this completed document of file.



**Surface Water System Monthly Operation Report
Chemical & Physical Analyses of
Raw, Coagulated, & Settled Water
Bureau of Water**

System Name:	System Number:
Certified Lab ID#:	For (Month/Yr):

Day	Raw Water						Coagulated Water		Settled Water	
	pH	Alkalinity (mg/L)	Temp (°C)	Hardness (mg/L)	Turbidity (NTU)	Color (CU)	pH	Alkalinity (mg/L)	Turbidity (NTU)	Disinfectant Residual (mg/L)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
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22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
Avg.										
Max.										
Min.										

Prepared by: _____ Date: _____
(signature)

South Carolina Department of Health and Environmental Control
Bureau of Water
Surface Water Supply Monthly Report
Chemical & Physical Analyses Raw, Coagulated, & Settled Water

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM BY ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

Month/Year: Month and year for which the report is being made.

Certified Lab ID #: Enter the identification number of the DHEC Certified Laboratory conducting the analyses.

Chemical & Physical Analyses: Enter, in the units specified, the values for each column heading for the raw, coagulated, and settled water analyses. If more than one daily turbidity measurement is made, record the maximum turbidity measured for the day. If more than one daily disinfectant residual measurement is made, record the lowest residual measured for the day.

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C.DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The public water system must keep a copy of this completed document of file.



**Surface Water System Monthly Operation Report
Chemical & Physical Analyses-Finished Water
Bureau of Water**

System Name:	System Number:
Lab Cert ID #:	For (Month/Yr):

Day	Finished Water									
	pH	Alkalinity (mg/L)	Temp (°C)	Disinfect Residual (mg/L)	Total Phosphate (mg/L)	Ortho Phosphate (mg/L)	Hardness (mg/L)	Turbidity (NTU)	Color (CU)	Fluoride (mg/L)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
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25										
26										
27										
28										
29										
30										
31										
Avg.										
Max.										
Min.										

Prepared by: _____ Date: _____
(signature)

South Carolina Department of Health and Environmental Control
Bureau of Water
Surface Water Supply Monthly Report
Chemical & Physical Analyses - Finished Water

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM-BY-ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

Month/Year: Month and year for which the report is being made.

Lab Cert ID #: Enter the identification number of the Certified Laboratory conducting the analyses.

Chemical and Physical analyses: Enter, in the units specified, the values for each column heading for the finished water analyses. If more than one daily turbidity measurement is made, record the maximum turbidity measured for the day. If more than one daily disinfectant residual measurement is made, record the lowest residual measured for the day.

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C. DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The Public water system must keep a copy of this completed document on file.



Surface Water System Monthly Operation Report Treatment Chemicals Bureau of Water

System Name:	System Number:
	For (Month/Yr):

Pounds or Gallons of Chemicals Used

Day	Pre-Disinfect.	Coagulant	Pre-pH Adj.	Post Disinfect.	Post pH Adj.	Phosphate	Fluoride	Ammonia	Other	Other	Other
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
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19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
Total											
Avg.											
Max.											
Min.											

* Please specify the chemical compound(s) and units used. Include product name if applicable

Pre-pH Adj. _____	Pre-Disinfect. _____	Coagulant _____
Post-pH Adj. _____	Post-Disinfect. _____	Phosphate _____
Fluoride _____	Other _____	Other _____

Prepared by: _____ Date: _____
(signature)

South Carolina Department of Health and Environmental Control
Bureau of Water
Surface Water Supply Monthly Report
Treatment Chemicals

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM-BY-ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

Month/Year: Month and year for which the report is being made.

Treatment Chemicals: Enter the amount of chemicals added to the water on a given day. Specify if the amount is in pounds or gallons.

Chemicals Used: In the spaces provided list the chemical name and product trade name when applicable. Also specify if the chemical is fed based on pounds or gallons

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C. DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The public water system must keep a copy of this completed document on file.



**Surface Water System Monthly Operation Report
Treatment Chemicals - Dosages
Bureau of Water**

System Name:	System Number:
	For (Month/Yr):

Chemical Dosage (mg/L)

Day	Pre-Disinfect.	Coagulant	Pre-pH Adj.	Post Disinfect.	Post pH Adj.	Phosphate	Fluoride	Ammonia	Other	Other	Other
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
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18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
Total											
Avg.											
Max.											
Min.											

Prepared by: _____
(signature)

Date: _____

South Carolina Department of Health and Environmental Control
Bureau of Water
Surface Water Supply Monthly Report
Treatment Chemicals - Dosages

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM-BY-ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

Month/Year: Month and year for which the report is being made.

Treatment Chemicals: Enter the calculated dosage for each chemical addition based on pounds or gallons of chemical added per day.

Dose in mg/l
(using dry)
$$\frac{(\text{pounds used}) \times (0.12^*) \times (\% \text{ strength of dry chemical})}{\text{MGD} \times (100)}$$

Dose in mg/l
(using liquid)
$$\frac{(\text{gallons of solution used}) \times (\% \text{ strength}) \times (\text{pounds per gal. of soln}) \times (0.12^*)}{\text{MGD} \times (100)}$$

* Conversion factor used to obtain correct units.

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C. DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The public water system must keep a copy of this completed document on file.



Surface Water System Monthly Operation Report Compliance with Turbidity Requirements for Filtered Systems & Bacteriological Analysis for Raw and Finished Water Bureau of Water

System Name:	System Number:	For (Month/Yr):
Lab Cert ID #:	Total Population:	<10,000 or ≥10,000

Day	Combined Filtered Water Turbidity Compliance				Bacteriological Analysis		
	Maximum Filtered Water Turbidity	(A) Number of Turbidity Measurements	(B) Number of Turbidity Measurements ≤ 95% Limit	Number of Turbidity Measurements > Max Allowed	Raw Water		Finished Water
					Total Coliform per 100 mls	Fecal Coliform per 100 mls	Total Coliform P / A
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
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26							
27							
28							
29							
30							
31							
	Total						

Max. Allow. Turbidity:	1 NTU or 5 NTU	Type of Plant:
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95% Turbidity Limit:	0.3 NTU or 0.5 NTU	Max. Approved Filtration Rate:
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The percentage of turbidity measurements meeting the specific limit is equal to: $B/A \times 100$

Prepared by: _____ Date: _____
(signature)

South Carolina Department of Health and Environmental Control
Bureau of Water
Surface Water Supply Monthly Report
Compliance with Turbidity Requirements for Filtered Systems and
Bacteriological Analysis of Raw & Finished Water

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM-BY-ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

Month/Year: Month and year for which the report is being made.

Lab Cert ID #: Enter the identification number of the DHEC Certified Laboratory conducting the analyses.

Total Population: Indicate whether the Primary + Secondary Population served by the water system is >10,000 or <10,000 people.

Enter the daily information specified in each column. The filtered water turbidity measurement should be taken immediately following the filtration process and prior to any chemical treatment of the water following the filtration process, especially lime addition. The raw water must be analyzed for total or fecal coliform density. The finished water must be analyzed for presence/absence of total coliform.

Max. Allowable Turbidity: Indicate the number that applies to your System. (1 NTU for Systems serving greater than or equal to 10,000 people, OR 5 NTU for Systems less than 10,000 people.)

95% Turbidity Limit: Indicate the number that applies to your System. (0.3 NTU for Systems serving greater than or equal to 10,000 people, OR 0.5 NTU for Systems less than 10,000 people)

Type of plant: Specify the type of treatment plant, e.g., conventional, direct filtration, etc.

Max. Approved Filtration Rate: Enter the approved maximum instantaneous filtration rate for your treatment plant.

Calculate the percentage of turbidity measurements meeting the specified turbidity limit (B/A x 100).

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C. DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The public water system must keep a copy of this completed document on file.



**Surface Water System Monthly Operation Report
Individual Filter Performance Worksheet
Bureau of Water**

System Name:	System Number:	For (Month/Yr):
Lab Cert ID #:	Total Population Served:	>10,000 or <10,000

1. Was the turbidity recorded every 15 minutes for each individual filter (while in operation) for the entire month? yes / no

2a. Was there a failure of any of the continuous turbidity monitoring equipment during the month? yes / no
 2b. If there was a failure, were grab samples taken from the filter effluent every 4 hours? yes / no / N.A.
 2c. If there was failure of any continuous monitoring equipment, was it repaired within 5 working days? yes / no / N.A.

3a. Did any individual filter(s) have a measured effluent turbidity level of > 1.0 NTU in two consecutive measurements taken 15 minutes apart? yes / no
 3b. If the answer to 3a was "yes", was the filter number(s), turbidity measurement(s), and date(s) for the exceedance reported to the Department within 7 days? yes / no / N.A.
 3c. If the answer to 3a was "yes", was a filter run profile and/or obvious reason for the exceedance sent to the Department within 7 days? yes / no / N.A.

4a. Did any individual filter(s) have a measured effluent turbidity level of > 0.5 NTU in two consecutive measurements taken 15 minutes apart, excluding the first four hours of operation after the filter has been backwashed or otherwise taken out of service? yes / no
 4b. If the answer to 4a was "yes", was the filter number(s), turbidity measurement(s), and date(s) for the exceedance reported to the Department within 7 days? yes / no / N.A.
 4c. If the answer to 4a was "yes", was a filter run profile and/or obvious reason for the exceedance sent to the Department within 7 days? yes / no / N.A.

5a. Did any individual filter(s) have a measured turbidity level of > 1.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of the last 3 months? yes / no
 5b. If the answer to 5a was "yes", was the filter number(s), turbidity measurement(s), and date(s) for the exceedance reported to the Department within 7 days? yes / no / N.A.
 5c. If the answer to 5a was "yes", have arrangements been made for a filter self-assessment to be conducted within 14 days of the exceedance? yes / no / N.A.

6a. Did any individual filter(s) have a measured turbidity level of > 2.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of the last 2 months? yes / no
 6b. If the answer to 6a was "yes", was the filter number(s), turbidity measurement(s), and date(s) for the exceedance reported to the Department within 7 days? yes / no / N.A.
 6c. If the answer to 6a was "yes", have arrangements been made to have a CPE conducted by the Department or by a third party approved by the Department within 30 days of the exceedance? yes / no / N.A.

Prepared by: _____ Date: _____
 (signature)

South Carolina Department of Health and Environmental Control
Bureau of Water
Surface Water Supply Monthly Report
Individual Filter Performance Worksheet

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM-BY-ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

Month/Year: Month and year for which the report is being made.

Lab Cert ID #: Enter the identification number of the DHEC Certified Laboratory conducting the analyses.

Total Population Served: Indicate whether the Primary + Secondary Population served by the water system is >10,000 or <10,000 people.

Answer "Yes" or "No" to each of the questions pertaining to individual filter performance. Enter "n/a" for any questions that are not applicable.

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C. DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The public water system must keep a copy of this completed document on file. Water systems must also keep individual filter performance data for at least three (3) years.



**Surface Water System Monthly Operation Report
CT Determination per Disinfectant Sequence
Bureau of Water**

System Name: _____ System Number: _____
 Lab Cert ID #: _____ For (Month/Yr): _____

Day	Disinfectant Concentration C (mg/L)	Peak Hourly Flow Through Treatment Segment (MGD)	Disinfectant Contact Time T (min)	CT Calc (= C x T)	pH	Water Temperature (°C)	CT Table	CT Calc/CT (table)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
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21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								

Disinfectant: _____
 Treatment Segment: _____

Level of Inactivation Required: **Giardia**
Viruses

Prepared by: _____ Date: _____
 (signature)

South Carolina Department of Health and Environmental Control
Bureau of Water
Surface Water Supply Monthly Report
CT Determination per Disinfectant Sequence

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM-BY-ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

Month/Year: Month and year for which the report is being made.

Lab Cert ID #: Enter the identification number of the DHEC Certified Laboratory conducting the analyses.

The disinfectant concentration (C), the disinfectant contact time (T), the pH, and the water temperature measurements must be taken at peak hourly flow. The pH measurement is only required if the disinfectant is free chlorine.

Peak Hourly Flow Rate Through Treatment Segment: enter the maximum instantaneous flow through the treatment segment during the day.

CT_{Table}: Value from tables in Guidance Manual. Round up for pH, and chlorine concentration, round down for temperature

Disinfectant: Specify disinfectant (e.g., free chlorine, ozone, etc.)

Treatment Segment: Enter disinfectant segment. Use a separate form for each disinfectant sampling site.

Level of Inactivation Required: Enter the log level of inactivation required by the disinfection process for both Giardia and viruses. For a well-operated conventional plant the log levels of inactivation will be 0.5 and 2.0, respectively.

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C. DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The public water system must keep a copy of this completed document on file.



**Surface Water System Monthly Operation Report
Disinfection Information
Bureau of Water**

System Name:	System Number:
Lab Cert ID #:	For (Month/Yr):

Day	Min. Disinfect. Resid. at Point-of-Entry to Distribution System (mg/L)	Sample Type for Point-of-Entry (POE)	CT calc/CT table Disinfectant Sequence						SUM (CT calc/CT table)
			1st	2nd	3rd	4th	5th	6th	
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
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28									
29									
30									
31									

A. Number of days SUM (CT calc/CT table) <1: _____

B. Compliance with disinfection residual criteria at Point-of-Entry to distribution system: _____

Days the Distribution Residual was <0.2 mg/L		
Day	Duration (hrs)	Date Reported

Prepared by: _____
(signature)

Date: _____

South Carolina Department of Health and Environmental Control
Bureau of Water
Surface Water Supply Monthly Report
Disinfection Information

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM-BY-ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

Month/Year: Month and year for which the report is being made.

Lab Cert ID #: Enter the identification number of the DHEC Certified Laboratory conducting the analyses.

Minimum Disinfectant Residual at Point-of-Entry to Distribution System: Enter the minimum disinfectant residual for the day. If the residual is less than 0.2 mg/l, the lowest level and duration of the period must be reported in this space, e.g., "0.1 – 3 hours".

Sample Type for Point-of-Entry: enter an "A" if a continuous disinfectant residual analyzer is used or a "G" if grab samples are taken, for determining the minimum disinfectant residual at the point of entry to the distribution system.

CT_{calc}/CT_{table} Disinfectant Sequence: Enter the value(s) calculated from form DHEC 1972 (6/2001) page 8 for each disinfectant sequence.

SUM (CT_{calc}/CT_{table}): Add the CT_{calc}/CT_{table} values from the first disinfectant sequence to the last.

A: Enter the number of days the SUM (CT_{calc}/CT_{table}) was < 1

B: Enter the day(s) of the month and duration the disinfectant residual was < 0.2 mg/l and enter the date DHEC was notified. If the disinfectant residual entering the system did not fall below 0.2 mg/l for the month enter "NONE".

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C. DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The public water system must keep a copy of this completed document on file.



**Surface Water System Monthly Operation Report
Distribution System Disinfectant Residual
Bureau of Water**

System Name:	System Number:	For (Month/Yr):
Lab Cert ID #:	Lab # for lab conducting HPC analyses:	

Day	No. of Sites Disinfect. Residual was Measured	No. of Sites Disinfect. Residual NOT Measured, but HPC Measured	No. of Sites where Disinfect. Residual NOT Detected & HPC NOT Measured	No. of Sites where Disinfectant Residual was NOT Detected and HPC > 500/ml	No. of Sites Disinfect. Residual NOT Measured and HPC > 500/ml	Average Disinfectant Residual (mg/L)
1						
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						
Total						Avg. Resid.
	a	b	c	d	e	

Compliance with Distribution System Disinfectant Residual Criteria
 $V = (c + d + e) / (a + b) \times 100 = (_ + _ + _) / (_ + _) \times 100 =$
For Previous Month: V =

Prepared by: _____ Date: _____
 (signature)

South Carolina Department of Health and Environmental Control
Bureau of Water
Surface Water Supply Monthly Report
Distribution System Disinfectant Residual Data

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM-BY-ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

Month/Year: Month and year for which the report is being made.

Cert. Lab ID: Enter the certified laboratory ID number for the person conducting the field analyses for disinfectant residual concentration. If HPC samples are collected for analysis in lieu of disinfectant residual measurements, enter the certified laboratory ID number, in the space provided, for the laboratory conducting the HPC analyses.

Enter the information specified in each column for the days disinfectant residuals were measured in the distribution system. At a minimum, disinfectant residuals must be measured at the same time and same point in the distribution system that the total coliform samples are taken. The sampling sites chosen must be representative of the distribution system.

Average Disinfectant Residual: For any day when the disinfectant residual samples were taken, enter the average for the day (excluding non-detects). Also, if chlorine is used to maintain a residual in the distribution system, analyze for free chlorine. If chloramines are used to maintain a residual in the distribution system, analyze for total chlorine.

Compliance with Distribution System Disinfectant Residual Criteria: Enter the totals from each column and calculate V.

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C. DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The public water system must keep a copy of this completed document on file.



**Surface Water System Monthly Operation Report
For Systems Using Chlorine and/or Chloramines
To Maintain A Residual In The Distribution System
Bureau of Water**

System Name: _____

System Number: _____

Lab Cert ID #: _____

For (Month/yr): _____

Month/Year	*Average Residual		Quarterly Average (mg/L)
	Chlorine (mg/L)	Chloramines (mg/L)	
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

*Average residual values may be obtained from page 10 of 15 of this form

RAA at the end of the most recent quarter: _____

Prepared by: _____ Date: _____
(signature)

South Carolina Department of Health and Environmental Control

Bureau of Water

Surface Water Supply Monthly Report

For systems using chlorine or chloramines to maintain a residual in the distribution system

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM-BY-ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

For (Month/Year): Month and year for which the report is being made.

Lab Cert ID #: Enter the identification number of the DHEC Certified Laboratory conducting the analyses.

Average Residual: Enter the average disinfectant residual for each month (as recorded on Page 10). If chlorine and chloramines are both used in the same month, enter the average residual for that month in the Chlorine column.

Quarterly Average: Calculate the quarterly average for each quarter. The quarterly average should only be calculated after data from all three months are available. When carrying over data from one year to the next, transfer all the data EXCEPT for the current quarter.

RAA: Calculate the Running Annual Average for the four (4) most recently completed quarters.

The average for the 12 most recent months must be recorded on the form at the end of each quarter. After the form has been filled, clear the past data from the current quarter, insert the data from the most recent month, and leave all remaining fields in the current quarter blank.

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C. DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The public water system must keep a copy of this completed document on file.



Surface Water System Monthly Operation Report For Systems Using Chlorine Dioxide Bureau of Water

System Name: _____ System Number: _____
 Lab Cert ID #: _____ For (Month/Yr): _____

Day	Chlorine Dioxide				Chlorite Routine / Reduced				
	Daily Chlorine Dioxide at POE (mg/L)	Follow-up #1 (mg/L)	Follow-up #2 (mg/L)	Follow-up #3 (mg/L)	Daily Chlorite at POE (mg/L)	Chlorite @ First Customer (mg/L)	Chlorite @ Average Res. Time (mg/L)	Chlorite @ Maximum Res. Time (mg/L)	Avg. of 3 Sample Set (mg/L)
1									
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									
1									

Chlorine Dioxide		
Acute MRDL violation?	Y / N	If violation occurred, was proper notification made? Y / N
Non Acute MRDL Violation?	Y / N	

Prepared by: _____ Date: _____
 (signature)

South Carolina Department of Health and Environmental Control
Bureau of Water
Surface Water Supply Monthly Report
For systems Using Chlorine Dioxide

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM-BY-ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

Month/Year: Month and year for which the report is being made.

Lab Cert ID #: Enter the identification number of the DHEC Certified Laboratory conducting the analyses.

Daily Chlorine Dioxide at POE: Enter the Chlorine Dioxide concentration at the entrance to the distribution system for each day.

Chlorine Dioxide Follow-up Samples: On each day following a routine sample monitoring result that exceeds the MRDL (0.8 mg/L), the system must take 3 samples as close to the first customer as possible, at intervals of at least 6 hours. If there are no disinfection addition points after the entrance to the distribution system (i.e., no booster chlorination), the system must take three samples as close to the first customer as possible at intervals of at least 6 hours. If booster chlorination is used, the system must take one sample at each of the following locations: as close to the first customer as possible, at the average residence time, and the maximum residence time. If follow-up samples are required, record the sample result for the day that the follow-up samples were taken.

Chlorite Routine/Reduced: Indicate Routine or Reduced monitoring status.

Daily Chlorite at POE: Enter the Chlorite concentration at the entrance to the distribution system for each day.

Chlorite Distribution Samples: On each day following a routine POE sample monitoring result that exceeds the MRDL (1.0 mg/L), the system must take a 3-sample set in the distribution system - near the first customer, at a location representative of average residence time, and at the maximum residence time. At least one 3-sample distribution set is required each month, regardless of POE results (at least one 3-sample set is required each quarter if the system is on reduced chlorite monitoring). All Chlorite distribution samples must be recorded for the day that the follow-up samples were taken not for the day of the exceedance.

Average of 3-sample Set: On any day that a 3-sample set is taken, record the average.

Violations: Indicate whether or not a violation(s) occurred during the month.

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C. DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The public water system must keep a copy of this completed document on file.



**Surface Water System Monthly Operation Report
For Systems Using Ozone
Bureau of Water**

System Name:	System Number:
Lab Cert ID #:	For (Month/Yr):

Monthly Data

Date (At least 1 monthly sample is required)	Monthly Bromate at POE (mg/L)	*Monthly Source Water Bromide (mg/L)
Avg.		

Quarterly Data

Month/Year	Bromate		*Bromide	
	Monthly Average (mg/L)	Quarterly Average (mg/L)	Monthly Average (mg/L)	Quarterly Average (mg/L)
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				

Bromate RAA at the end of the most recent quarter:

Bromide RAA at the end of the most recent quarter:

* Bromide monitoring is only required if seeking or maintaining reduced bromate monitoring.

Type of Bromate Monitoring: Routine or Reduced

Prepared by: _____
(signature)

Date: _____

South Carolina Department of Health and Environmental Control
Bureau of Water
Surface Water Supply Monthly Report
For Systems Using Ozone

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM-BY-ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

Month/Year: Month and year for which the report is being made.

Lab Cert ID #: Enter the identification number of the DHEC Certified Laboratory conducting the analyses.

Monthly Bromate at POE: Enter the Bromate concentration at the entrance to the distribution system. At least 1 sample is required each month for Routine Bromate monitoring for systems using Ozone. Calculate the monthly average if the system's monitoring plan calls for multiple samples.

Monthly Source Water Bromide: For systems pursuing or maintaining reduced monitoring status for Bromate, enter the source water Bromide concentration. At least 1 sample is required each month to achieve or maintain reduced monitoring for Bromate. Calculate the monthly average if the monitoring plan calls for multiple samples.

Type of Bromate Monitoring: Indicate Routine or Reduced Bromate monitoring status.

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C. DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The public water system must keep a copy of this completed document on file.



Surface Water System Monthly Operation Report Compliance With DBP Precursor Removal Requirements Bureau of Water

System Name: _____ System Number: _____ For (Month/yr): _____
Lab Cert ID #: _____

Month	Source Water		Treated Water TOC (mg/L)	(A) Actual % TOC Removal	(B) Required % TOC Removal	Basis for Required % Removal	Removal Ratio (A) / (B)	Quarterly Average Ratio	RAA ¹ Ratio (Last 4 Quarters)
	Alkalinity (mg/L)	TOC (mg/L)							
January									
February									
March									
April									
May									
June									
July									
August									
September									
October									
November									
December									

¹ RAA = Running Annual Average, Computed Quarterly

Alternate Criteria

**Should only be filled out if Alternate Criteria 3 or 4 are being used

Month	Source water			Finished water		
	DOC (mg/L)	UV ₂₅₄ (m ⁻¹)	SUVA (L/mg-m)	DOC (mg/L)	UV ₂₅₄ (m ⁻¹)	SUVA (L/mg-m)
January						
February						
March						
April						
May						
June						
July						
August						
September						
October						
November						
December						

Alternate Criteria	
Alt. 1	Source Water TOC < 2.0 mg/L
Alt. 2	Treated Water TOC < 2.0 mg/L
Alt. 3	Source Water SUVA < 2.0 L/mg-m
Alt. 4	Treated Water SUVA < 2.0 L/mg-m

Prepared by: _____ Date: _____
(signature)

South Carolina Department of Health and Environmental Control
 Bureau of Water
 Surface Water Supply Monthly Report
 Compliance With DBP Precursor Removal Requirements

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM-BY-ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

Month/Year: Month and year for which the report is being made.

Lab Cert ID #: Enter the identification number of the DHEC Certified Laboratory conducting the analyses.

Source Water Alkalinity & TOC: Enter the source (raw) water alkalinity and Total Organic Carbon (TOC) numbers in the spaces provided. Source water alkalinity and TOC must be taken along with treated water TOC. (Referred to as paired samples). If more than one sample is taken per month, samples should be averaged.

Treated Water TOC: Enter the treated water TOC number. Must be taken in conjunction with raw water alkalinity and TOC. If more than one sample is taken per month, samples should be averaged.

Actual % TOC Removal: Enter the calculated percent removal using the following formula: $(1 - \text{treated TOC} / \text{source TOC}) * 100$

Required % TOC Removal: Using the following chart, look-up the required percent TOC removal based on the raw water alkalinity and the source water TOC. Enter the number in the space provided on the worksheet.

Source TOC (mg/L)	Source Alkalinity		
	0 to 60	>60 to 120	>120
>2.0 to 4.0	35	25	15
>4.0 to 8.0	45	35	25
>8.0	50	40	30

Basis for Required % Removal: Enter Step 1 if the chart was used. If the required percent removal could not be achieved using the chart, then enter the alternate criteria used and fill out the corresponding table.

Removal Ratio (A)/(B): Divide the actual percent removal by the required percent removal.

Quarterly Average Ratio: Compute the quarterly average ratio from the monthly removal ratios for the past quarter

RAA Ratio (Last 4 Quarters): Compute the running annual average from the last four quarterly average ratios.

Alternate Criteria: Calculate the SUVA by dividing the DOC by UV₂₅₄ measurements.

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C. DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The public water system must keep a copy of this completed document on file.



**Surface Water System Monthly Operation Report
Operation of Filters
Bureau of Water**

System Name: _____ System Number: _____

Filter Number: _____ For (Month/Yr): _____

Day	Time Backwash Initiated (military)	Time Backwashed (minutes)	Time in Service (hours)	Wash Water Used (gallons)	Comments
1					
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					
Total					
Average					
Maximum					
Minimum					

Prepared by: _____ Date: _____
(signature)

South Carolina Department of Health and Environmental Control
Bureau of Water
Surface Water Supply Monthly Report
Operation of Filters

Do NOT Send In With Monthly Report
This page must be kept on file at the plant

1. PURPOSE:

This form, properly completed, is required to be submitted to the South Carolina Department of Health and Environmental Control (DHEC) as requested by Section 44-55-40, paragraph F, South Carolina Code of Laws, 1976, as last amended June 2000. Its purpose is to assure the safety of water served to the public with respect to bacteriological and chemical quality and to further efficient processing through adequate tests and records.

2. ITEM-BY-ITEM INSTRUCTIONS:

System Name: Name of the public water system. If the system has more than one surface water treatment plant, also specify the plant name.

System Number: Enter the seven-digit identification number assigned to the public water system by DHEC.

Month/Year: Month and year for which the report is being made.

For each backwash cycle record the:

(1) Time the backwash cycle was initiated in military time,

(2) How long was the filter backwashed in minutes,

(3) Number of gallons of wash water used in the backwash and rewash (filter-to-waste) modes.

At the end of the month calculate the totals and averages and maximum and minimums of, time backwashed, time rewash, time in service, and gallons of wash water used.

3. OFFICE MECHANICS AND FILING

The original of this form, when completed, must be signed, dated, and submitted to the Bureau of Water, S.C. DHEC, 2600 Bull Street, Columbia, SC 29201, no later than the 10th of the following month. The public water system must keep a copy of this completed document on file.