

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT

IOWA DNR WATER SUPPLY

Basic Information

S/EP: _____

System Name: _____

PWSID #: _____

Month: _____

Year: _____

Day	Operating Hours	Pumpage		Fluoride		Raw Turbidity	Settled Turbidity (individual sedimentation basin)							
	Number of hours the plant operated per day.	Raw in 1,000s Gallons Per Day	To System in 1,000s Gallons Per Day	Quantity Used in lbs. or gal. (circle one)	Finished Water (mg/L)	Highest Daily Reading (NTU)	Highest Daily Reading Sed 1 (NTU)	Highest Daily Reading Sed 2 (NTU)	Highest Daily Reading Sed 3 (NTU)	Highest Daily Reading Sed 4 (NTU)				
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27														
28														
29														
30														
31														
Total	0	0	0	0							0	0	0	0
Avg														
Max														
Min														

I certify that I am familiar with the information contained in this report and that the information is true, complete, and accurate.

DRC Operator or Designee's Signature: _____

Certificate #: _____ Grade: _____ Date: _____

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT

IOWA DNR WATER SUPPLY

Disinfection/Oxidation Data Page

S/EP: _____

System Name: _____

PWSID #: _____

Month: _____

Year: _____

Day	Chlorine Residual							CT	Chlorine Dioxide	Chlorite	Quantity of Disinfectant Used				
	Source/Entry Point (S/EP)				Distribution						Ratio of CT Obtained to CT Required***	At S/EP** (mg/L)	At S/EP** (mg/L)	Chlorine Dioxide in lbs. or gals. (circle one)	Chlorine in lbs. or gals. (circle one)
	Number of Tests Taken*	Specify Free (F) or Total (T)	Lowest Measured Residual (mg/L)	Continuous Hours Less than 0.3 mg/L Free or 1.5 mg/L Total	Number of Tests Taken	Lowest Measured Residual (mg/L) Circle One T or F	Number with Undetected Residual								
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Avg															
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Min															

*If continuous monitoring of chlorine is provided, enter "C" in the space provided.

**If chlorine dioxide MRDL of 0.8 mg/L or daily chlorite MCL of 1.0 mg/L is exceeded, then "Chlorine Dioxide/Chlorite Supplemental Monitoring Form" must be completed.

***Must be calculated daily and the ratio of CT Obtained to CT Required must be greater than or equal to 1.0 on a daily basis.

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Certificate #: _____ Grade: _____ Date: _____

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT
IOWA DNR WATER SUPPLY
Turbidity Data Page 1 of

S/EP: _____

System Name: _____

PWSID #: _____

Month: _____

Year: _____

Day	Combined Filter Effluent			Individual Filter Effluent														
	Number of Readings Taken*	Number of Readings >0.3 NTU	Highest Daily Reading (NTU)	#1			#2			#3			#4					
				Highest Consecutive NTU Results >0.5 NTU anytime after 4 Hours from Start Up or Backwash	Daily Highest (NTU)	# of Consec Results >1.0 NTU	Highest Consecutive NTU Results >0.5 NTU anytime after 4 Hours from Start Up or Backwash	Daily Highest (NTU)	# of Consec Results >1.0 NTU	Highest Consecutive NTU Results >0.5 NTU anytime after 4 Hours from Start Up or Backwash	Daily Highest (NTU)	# of Consec Results >1.0 NTU	Highest Consecutive NTU Results >0.5 NTU anytime after 4 Hours from Start Up or Backwash	Daily Highest (NTU)	# of Consec Results >1.0 NTU			
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31																		
Total																		
Avg																		
Max																		
Min																		

*If continuous monitoring of turbidity is provided, measurements must be recorded at equal time intervals at least once every 4 hours, or hourly for plants with population >100,000.

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.

DRC Operator or Designee's Signature: _____

Certificate #: _____ Grade: _____ Date: _____

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT
IOWA DNR WATER SUPPLY
Summary Page 1 of 2

S/EP: _____

SYSTEM NAME: _____

PWSID #: _____

MONTH: _____

YEAR: _____

1. DISINFECTANT RESIDUAL ENTERING THE DISTRIBUTION SYSTEM:

- a. How many times did the residual disinfectant concentration of the water ENTERING the distribution system fall below 0.3 mg/L of free chlorine, or 1.5 mg/L of total chlorine for more than 4 hours?
- b. Date and duration of each occurrence:

Date	Duration (Hours)	Date and Time DNR Notified	Person Notified

2. DISINFECTANT RESIDUAL WITHIN THE DISTRIBUTION SYSTEM:

- a. Number of times that the disinfectant residual was measured in the system:
- b. Number of times the disinfectant residual **WAS NOT** measured but where the HPC was measured:
- c. Number of times the disinfectant residual was measured but **NOT** detected and no HPC was measured:
- d. Number of times the disinfectant residual was measured but **NOT** detected and the HPC was greater than 500/ml:
- e. Number of times where the disinfectant residual **WAS NOT** measured and the HPC was greater than 500/ml:

From above Calculate $V = [(C+D+E) / (A+B)] \times 100\%$: %
 For last month, V was: %
 (V must not exceed 5% for any two consecutive months)

3. CALCULATION OF MAXIMUM RESIDUAL DISINFECTANT LEVEL (MRDL):

Calculation of maximum disinfectant residual is based on the monthly average of the **Total** chlorine residual measured at the same time compliance bacterial samples are collected (includes repeat/check samples but excludes specials) or include the S/EP chlorine monitoring. The RAA must be calculated at the end of each calendar quarter and include the previous 12 months.

	1	2	3	4	5	6	7	8	9	10	11	12
Actual Month/Year:												
# of samples used in calc.:												
Monthly Avg.:												
Running Annual Average (RAA)*:												<input type="text"/>

*Should be less than the MRDL of 4.0 mg/L

4. FINISHED WATER TURBIDITY:

- a. Number of turbidity readings taken:
- b. Number of readings greater than 0.3 NTU:
- c. Percent of readings less than or equal to 0.3 NTU: %
- d. Specify date and duration of any turbidity measurement greater than 1 NTU:

Date	Duration (Hours)	Date and Time DNR Notified	Person Notified

I certify that I am familiar with the information contained in this report and that the information is true, complete, and accurate.

DRC Operator or Designee's Signature: _____

Certificate #: _____ Grade: _____ Date: _____

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT

IOWA DNR WATER SUPPLY

Chlorine Dioxide/Chlorite Supplemental Monitoring Page

S/EP: _____

SYSTEM NAME: _____

PWSID #: _____

MONTH: _____

YEAR: _____

Monthly Chlorine Dioxide Daily MRDL Exceedance

NOTE: This monitoring must follow the written sampling plan.

Event:	1	2	3	4	5	6
Date S/EP sample exceeded 0.8 mg/L:						
Measured Level:						

Event	Following days' results:	Date	Time	Location	Level	Was MRDL Exceeded? (Yes/No)	Non-acute Violation (Yes/No)	Acute Violation* (Yes/No)
1	Source/Entry Point:			S/EP				
	Distribution (3):							
2	Source/Entry Point:			S/EP				
	Distribution (3):							
3	Source/Entry Point:			S/EP				
	Distribution (3):							
4	Source/Entry Point:			S/EP				
	Distribution (3):							
5	Source/Entry Point:			S/EP				
	Distribution (3):							
6	Source/Entry Point:			S/EP				
	Distribution (3):							

*For each **Acute** violation event, provide the following information:

Event:	1	2	3	4	5	6
Date & Time DNR Notified:						
Person Notified:						

Monthly Chlorite Daily MCL Exceedance

Did daily S/EP monitoring result exceed MCL of 1.0 mg/L (Yes or No)?	
Were three distribution samples collected the following day (Yes or No)?	
What was the average of the three distribution samples?	
Was a non-acute MCL violation incurred (Yes or No)?	

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DRC Operator or Designee's Signature: _____

Certificate #: _____

Grade: _____

Date: _____

Step 1 TOC Removal Requirement MATRIX

Source-water TOC [mg/L] between...	Source-water alkalinity [mg/L as CaCO ₃] between...					
	0 to 60		>60 to 120		>120 or more	
>2.0 and 4.0	35.0%	Removal	25.0%	Removal	15.0%	Removal
>4.0 and 8.0	45.0%	Removal	35.0%	Removal	25.0%	Removal
>8.0 or more	50.0%	Removal	40.0%	Removal	30.0%	Removal

- 1.) Look at raw water TOC. If ≤ 2.0 , use ACC 1.
- 2.) Calculate actual monthly TOC removal.

$$(1 - (\text{treated water TOC} / \text{source water TOC})) \times 100$$
- 3.) Determine required monthly TOC % removal from matrix.
- 4.) Calculate the Step 1 removal ratio.

$$\text{actual monthly TOC \% removal} / \text{required monthly TOC \% removal}$$
- 5.) Calculate Annual average

$$\text{Sum of monthly \% removal ratio} / 12$$

NOTE: Contact DNR Water Supply Engineering Section before completing any Step 2 Jar Testing.

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT FORM

IOWA DNR WATER SUPPLY

Alternative Compliance Criteria Report Page 1 of 2

S/EP #: _____

System Name: _____

PWSID #: _____

Month: _____

Year: _____

This Alternative Compliance Criteria (ACC) Report is being submitted to request the following ACC: (check one)

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

#1	Source Water TOC less than 2.0 mg/L? (calculated quarterly as a running annual average)												
		1	2	3	4	5	6	7	8	9	10	11	12
	Actual Month/Yr												
	Monthly TOC												
	RAA												

#2	Treated Water TOC less than 2.0 mg/L? (calculated quarterly as a running annual average)												
		1	2	3	4	5	6	7	8	9	10	11	12
	Actual Month/Yr												
	Monthly TOC												
	RAA												

#3	Source Water TOC less than 4.0 mg/L? (calculated quarterly as a running annual average)												
	AND Source Water Alkalinity over 60 mg/L (as CaCO3)? (calculated quarterly as a running annual average)												
		1	2	3	4	5	6	7	8	9	10	11	12
	Actual Month/Yr												
	Monthly TOC												
	RAA TOC												
	Monthly Alkalinity												
	Avg. RAA Alkalinity												
	Max.												
	Min.	Yearly Average TTHM: <input type="text"/> mg/L						Yearly Average HAA5: <input type="text"/> mg/L					
ATTACH COPY OF COMPLIANCE REPORT FOR DISINFECTION BY-PRODUCTS (TTHM AND HAAS)													

#4	TTHM and HAA5 no greater than 0.040 mg/L and 0.030 mg/L, respectively?												
	Yearly Average TTHM: <input type="text"/> mg/L						Yearly Average HAA5: <input type="text"/> mg/L						
	ATTACH COPY OF COMPLIANCE REPORT FOR DISINFECTION BY-PRODUCTS (TTHM AND HAAS)												
	AND only chlorine is used in the whole plant and distribution system.												
	I certify that for the last 12 months, only free chlorine was used as a disinfectant for primary disinfection and for maintenance of a residual in the distribution system.												
Certified Operators Signature: _____						Certification #: _____			Date: _____				

#5	Source water SUVA less than or equal to 2.0 L/mg-m? (calculated quarterly as a running annual average)												
	(Source water SUVA is the ultraviolet light absorption at 254 nanometers divided by the dissolved organic carbon concentration in the source water before any treatment of any kind. Measure monthly.)												
		1	2	3	4	5	6	7	8	9	10	11	12
	Actual Month/Year												
	Monthly SUVA												
RAA SUVA													

#6	Treated water SUVA less than or equal to 2.0 L/mg-m? (calculated quarterly as a running annual average)												
	(Treated water SUVA is the ultraviolet light absorption at 254 nanometers in the finished water divided by the dissolved organic carbon concentration before any disinfection of any kind. Measured monthly)												
		1	2	3	4	5	6	7	8	9	10	11	12
	Actual Month-Year												
	Monthly SUVA												
RAA SUVA													

SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT FORM

IOWA DNR WATER SUPPLY

Alternative Compliance Criteria Report Page 2 of 2

System must be practicing Enhanced Softening for use of ACC #7 & #8

#7	Treated water alkalinity less than 60 mg/L (as CaCO₃)? (calculated quarterly as a running annual average)																					
		1	2	3	4	5	6	7	8	9	10	11	12									
	Actual Month-Year																					
	Monthly Treated Alkalinity																					
	RAA Treated Alk.																					
	AND cannot achieve the Step 1 TOC removal requirement																					
Step 1 Compliance Summary:																						
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="3">TOC % Removal Summary</th> </tr> <tr> <th style="width: 33%;">TOC % Removal</th> <th style="width: 33%;">Requirement</th> <th style="width: 33%;">TOC Removal Ratio</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>														TOC % Removal Summary			TOC % Removal	Requirement	TOC Removal Ratio			
TOC % Removal Summary																						
TOC % Removal	Requirement	TOC Removal Ratio																				

#8	Magnesium hardness removal greater than or equal to at least 10 mg/L (as CaCO₃)? (calculated quarterly as a RAA)																					
		1	2	3	4	5	6	7	8	9	10	11	12									
	Actual Month-Year																					
	Monthly Raw Mg. Hardness																					
	Monthly Treated Mg. Hardness																					
	Monthly Mg Removal																					
RAA Mg Removal																						
AND cannot achieve the Step 1 TOC removal requirement																						
Step 1 Compliance Summary:																						
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="3">TOC % Removal Summary</th> </tr> <tr> <th style="width: 33%;">TOC % Removal</th> <th style="width: 33%;">Requirement</th> <th style="width: 33%;">TOC Removal Ratio</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>														TOC % Removal Summary			TOC % Removal	Requirement	TOC Removal Ratio			
TOC % Removal Summary																						
TOC % Removal	Requirement	TOC Removal Ratio																				

I certify that I am familiar with the information contained in this report and that the information is true, complete, and accurate.

DRC Operator or Designee's Signature: _____

Certificate #: 0 Grade: 0 Date: _____