

**GROUNDWATER MONTHLY OPERATION REPORT  
FOR SYSTEMS PROVIDING 4-LOG VIRUS INACTIVATION  
IOWA DNR WATER SUPPLY**

Facility Name: \_\_\_\_\_

PWSID Number: \_\_\_\_\_

Treatment Plant #: \_\_\_\_\_ S/EP #: \_\_\_\_\_

Month: \_\_\_\_\_ Year: \_\_\_\_\_

**Write the DNR-assigned 4-log parameters from your operation permit in the blue box.**

Day	Pumpage to system in thousands of gallons	Peak Hourly Flow Rate (gpm)	Chlorine										Fluoride			Day		
			Quantity Used pounds or gallons (circle)	Free Chlorine (mg/L)				Total Chlorine (mg/L)				4-log		Quantity Used pounds or gallons (circle)	Raw mg/L		S/EP mg/L	
				At Plant		In System		At Plant		In System		Contin- uous (C) or Grab (G) sample	Lowest Meas- ured Residual (mg/L)					
				# of Tests	Avg.	# of Tests	Avg.	# of Tests	Avg.	# of Tests	Avg.							
1																		1
2																		2
3																		3
4																		4
5																		5
6																		6
7																		7
8																		8
9																		9
10																		10
11																		11
12																		12
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25																		25
26																		26
27																		27
28																		28
29																		29
30																		30
31																		31
Total																		Total
Avg.																		Avg.
Max.																		Max
Min.																		Min.

Percentage of available chlorine in compound applied: \_\_\_\_\_ %

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: \_\_\_\_\_

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Month: \_\_\_\_\_ Year: \_\_\_\_\_

Write the DNR-assigned 4-log parameters from your operation permit in the blue box.

Day	Highest Measured Maximum pH*	Minimum Clearwell Depth*	Temperature*			
	(finished water)	(feet)	(°C)			
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.						
Max.						
Min.						

Maximum Residual Disinfectant Level (MRDL) Calculation			
Actual Month /Year	Number of Samples Used in Calculation	Monthly Average (mg/L)	Running Annual Average (RAA)* (mg/L)

Calculation of maximum disinfectant residual is based on the monthly average of the Total chlorine residual measured at the same time compliance bacteria samples are collected (includes Routine and Repeat samples but excludes Specials). \*Should not exceed 4.0 mg/L.

The RAA must be calculated at the end of each calendar quarter and include the previous 12 months.

**Water Levels (feet)**

Date: \_\_\_\_\_

Well #	Static	Pumping

Comments: \_\_\_\_\_

\*Only required if the system has set limits as part of the system's 4-log approval

\*\* Only if required in the operation permit

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PWSID Number: \_\_\_\_\_

Treatment Plant #: \_\_\_\_\_

S/EP #: \_\_\_\_\_

Month: \_\_\_\_\_

Year: \_\_\_\_\_

**1. Complete this section if your system uses continuous chlorine monitoring:**

a. Did the chlorine residual at any time fall below the DNR required minimum?  Yes  No

If you answered yes to above, complete columns 1 & 2 in the table below.

b. Was the state minimum residual restored within 4 hours?  Yes  No

If the DNR-set minimum free chlorine residual is not restored within 4 hours the system must notify the DNR as soon as possible but by no later than the end of the next business day. Complete columns 3 & 4 in the table below.

1. Date/Time	2. Duration (hours)	3. Date and Time DNR Notified	4. Person Notified

c. If continuous monitoring equipment failed at any time during this reporting month, record the event information below.

If yes,

Date	Time

Returned to service?

Date	Time

d. Were grab samples collected every 4 hours until the equipment was returned to service?  Yes  No

**2. Complete this section if your system uses daily peak hourly flow chlorine monitoring:**

a. Did the chlorine residual at any time fall below the DNR-required minimum?  Yes  No

If you answered yes to above, complete columns 1 & 2 in the table below.

b. Were grab samples collected every 4 hours until the residual level returned to the DNR-required minimum?  Yes  No

c. Was the DNR-set minimum residual restored within 4 hours?  Yes  No

If the DNR-set minimum free chlorine residual is not restored within 4 hours, the system must notify the DNR as soon as possible but by no later than the end of the next business day. Complete columns 3 & 4 in the table below.

1. Date/Time	2. Duration (hours)	3. Date and Time DNR Notified	4. Person Notified

**3. Complete this section if your system uses a tank for contact time compliance:**

a. Did the water level in the tank fall below the IDNR-required minimum?  Yes  No

If you answered yes to above, complete columns 1 & 2 in the table below.

If steps were taken to compensate for the low water level to still meet the 4-log inactivation (i.e., increased free chlorine residual), attach documentation explaining these steps.

b. Was the minimum water level restored within 4 hours?  Yes  No

If the DNR-set minimum water level is not restored within 4 hours the system must notify the DNR as soon as possible but by no later than the end of the next business day. Complete columns 3 & 4 in the table below.

1. Date/Time	2. Duration (hours)	3. Date and Time DNR Notified	4. Person Notified

**4. Complete this section if your system has a maximum peak flow rate:**

a. Did the rate exceed the maximum allowed peak flow rate? If so, complete the columns below.  Yes  No

1. Date/Time	2. Duration (hours)	3. Date and Time DNR Notified	4. Person Notified

**5. Complete this section if your system uses pH adjustment:**

a. Did the maximum pH of your finished water exceed 9.05 pH units during the month?  Yes  No

If you answered yes, complete the table and attach documentation to explain what steps were taken to ensure the CT ratio was met.

1. Date/Time	2. Duration (hours)	3. Date and Time DNR Notified	4. Person Notified

**6. Were any treatment components taken out of service? If so, how did you meet 4-log? Describe on a separate sheet.**