UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
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Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR)

State of Wyoming and Region 8 Tribal Lands

Operational Evaluation Report (Rev 3)

For

GROUND WATER DRINKING WATER SYSTEMS

A. ADMINISTRATIVE			
PWS No.		**Prepared Date**	
PWS Name		**Prepared By**	
		Title	

B. OPERATION EVAULATION LEVEL (OEL)			
This report is submitted for the following monitoring period.			
Check One: ☐ 1st Quarter ☐ 2nd Quarter ☐ 3rd Quarter ☐ 4th Quarter	**Year**		
Is the Total Trihalomethanes (TTHM) OEL Exceeded 0.080 mg/L (or 80 ug/L)? ☐ Yes ☐ No	**Level**		☐ mg/L ☐ ug/L
• If yes, what was the last sample collection date?			
• If yes, what was the TTHM present in the sample result?	**Level**		☐ mg/L ☐ ug/L
• If yes, what was the amount of chloroform present in the sample result?	**Level**		☐ mg/L ☐ ug/L
Is the Haloacetic Acids (HAA5s) OEL Exceeded 0.060 mg/L (or 60 ug/L)? ☐ Yes ☐ No	**Level**		☐ mg/L ☐ ug/L
• If yes, what was the last sample collection date?			
• If yes, what was the HAA5 sample result for the current quarter	**Level**		☐ mg/L ☐ ug/L
• If yes, what was the amount of monobromoacetic acid present in the sample result?	**Level**		☐ mg/L ☐ ug/L
• If yes, what was the amount of dibromoacetic acid present in the sample result?	**Level**		☐ mg/L ☐ ug/L

C. HISTORY	
1. In the previous quarter, was the OEL exceeded?	☐ Yes ☐ No
• If yes, did your system submit an Operation Evaluation Report (OER)? • If your system did submit an OER in the previous quarter, please skip to Section H.	☐ Yes ☐ No ☐ N/A

2. In past years, do your TTHMs normally exceed 0.080 mg/L during the quarter indicated above, reduce in the next quarter, and maintain the calculated locational running annual average (LRAA) value below 0.080 mg/L?	☐ Yes ☐ No ☐ Unsure

- If yes, you must provide the following information from the previous year to demonstrate that TTHMs levels drop the following quarter and normally remain in compliance.

Month 1		Year		TTHM Level		☐ mg/L ☐ ug/L
Month 2		Year		TTHM Level		☐ mg/L ☐ ug/L

- Month 1 is the month of the sample collection date (from Section B) for the previous year. Month 2 is the following quarter during the previous year.
- If your data demonstrates a normal reduction of TTHMs to remain in compliance, then you may proceed directly to section H.

3. In past years, do your HAA5s normally exceed 0.060 mg/L during the quarter indicated above, reduce in the next quarter, and maintain the calculated locational running annual average (LRAA) value below 0.060 mg/L?	☐ Yes ☐ No ☐ Unsure

- If yes, you must provide the following information from the previous year to demonstrate that TTHMs normally remain in compliance.

Month 1		Year		HAA5 Level		☐ mg/L ☐ ug/L
Month 2		Year		HAA5 Level		☐ mg/L ☐ ug/L

- Month 1 is the month of the sample collection date (from Section B) for the previous year. Month 2 is the following quarter during the previous year.
- If your data demonstrates a normal reduction of HAA5s to remain in compliance, then you may proceed directly to section H.

D. SOURCE WATER ☐ If this submittal is an update from prior reports, **skip to Section H.**

1. Does your system have a wellhead protection plan?	☐ Yes ☐ No
2. Have any changes occurred with obtaining your source water? e.g., changed well pumping depth, well rehab, changed screen depth, changed pumping rates, pumping times or frequency, etc.	☐ Yes ☐ No
3. Have you changed/added sources? e.g., turned on emergency sources, drilled new well, etc.	☐ Yes ☐ No
4. Have you seen changes in source water quality? e.g., changes in turbidity, pH, temp, alkalinity, hardness; new impacts from drought conditions, heavy rain, animal feed lots, agricultural practices, etc.	☐ Yes ☐ No

5. If you answered "**YES**" to questions above (Sections D.1-D.4), please explain:

6. Do you have source **water temperature** data during the month of the OEL exceedance?			☐ Yes ☐ No
• If yes, what was the water temperature nearest to the DBP sample collection date above?		Date Measured	
• If no, please measure the temperature in the source water.		Date Measured	
7. Do you have raw water **pH** data during the month of the OEL exceedance?			☐ Yes ☐ No
• If yes, what was the pH value nearest to the DBP sample collection date above?		Date Measured	
• If no, please measure the pH in the source water.		Date Measured	
8. Do you have raw water **hardness** data during the month of the OEL exceedance?			☐ Yes ☐ No
• If yes, what was the hardness value nearest to the DBP sample collection date above?		Date Measured	
• If no, please measure the hardness in the source water.		Date Measured	
9. Do you have raw water **Ammonia** data during the month of the OEL exceedance?			☐ Yes ☐ No
• If yes, what was the ammonia level nearest to the sample collection date above?		Date Measured	
• If no, please measure the ammonia in the source water.		Date Measured	
10. Do you have raw water **Total Organic Carbon (TOC)** data during the month of the OEL exceedance?			☐ Yes ☐ No
• If yes, what was the TOC value nearest to the sample collection date above?		Date Measured	
• If no, please measure the TOC in the source water.		Date Measured	

E. WATER TREATMENT ☐ If this submittal is an update from prior reports, **skip to Section H.**

1. Have you changed the type of disinfectant? e.g., chlorine to chloramines, chemical product, etc.	☐ Yes ☐ No
2. Have you changed the amount of chlorine dosage? e.g., trying to maintain higher chlorine residuals	☐ Yes ☐ No
3. Have you changed or added locations of disinfectant points along the treatment process?	☐ Yes ☐ No
4. Does your system provide any treatment processes other than disinfection?	☐ Yes ☐ No
5. Have you made changes to any other chemical applications? e.g., change any chemicals (change filter aid), filter material, changes in application points, changing dosage of any chemical, etc.	☐ Yes ☐ No

6. If you answered "**YES**" to any of the questions above (Sections E.1-E.5), please explain:

7. For the chlorine product, please answer the following:			
• What is the name of manufacturer?			
• What is the name of the product?			
8. Do you have chlorine dosage data during the month of the OEL exceedance?			☐ Yes ☐ No
• If yes, what was the average chlorine dosage nearest to the sample collection date above?		Date Measured	
• If no, please measure the chlorine dosage.		Date Measured	
• If unable to calculate the dosage, please provide the following information:			
Water amount pumped on TTHM/HAA5 sample collection date			☐ gal ☐ MG
Amount of chlorine used on TTHM/HAA5 sample collection date			☐ lbs ☐ gal
9. Do you have chlorine residual data at the point of entry (POE) during the month of the OEL exceedance?			☐ Yes ☐ No
• If yes, what was the POE chlorine residual nearest to the sample collection date above?		Date Measured	
• If no, please measure the POE **free** chlorine residual.		Date Measured	
10. Does your system use chloramines (not free chlorine) for secondary disinfection?			☐ Yes ☐ No
• If yes, what was the ammonium dosage nearest to the DBP sample collection date above?		Date Measured	
• If yes and you don't know the ammonium dosage, please measure the ammonium dosage rate.		Date Measured	
• If yes, what was the POE chlorine residual nearest to the DBP sample collection date above?		Date Measured	
• If no, please measure the POE **total** chlorine residual.		Date Measured	
11. Do you have finished water **nitrate** data during the month of the OEL exceedance?			☐ Yes ☐ No
• If yes, what was the maximum nitrate level nearest to the DBP sample collection date above?		Date Measured	
• If no, what was the most recent nitrate results measured? If data is from multiple wells, provide the highest value.		Date Measured	
12. Do you have finished water (after all treatment processes) Total Organic Carbon (TOC) data during the month of the OEL exceedance?			☐ Yes ☐ No
• If yes, what was the TOC during or closest to the sample collection date above?		Date Measured	
• If no, please measure the finished water TOC.		Date Measured	

F. DISTRIBUTION SYSTEM ☐ If this submittal is an update from prior reports, **skip to Section H.**				
1. Have you added additional service areas (industry or residential)? e.g., adding additional pipes or annexing additional areas of service which could change residence times.				☐ Yes ☐ No
2. Have you experienced significant increases or decreases in water demand? e.g., drought restrictions, industry opening/closing, population change				☐ Yes ☐ No
• If yes, what is the primary suspected cause of water demand changes?				
3. Does your system have storage tanks in the distribution system?				☐ Yes ☐ No
• If yes, how many water storage tanks does your system have?				
• Do any storage tank(s) fill and drain from one pipe into the storage tank?				☐ Yes ☐ No
• Do any above ground metal storage tanks have condensation differences along the outer wall between upper and lower portions of the storage tank in the morning? *Note: This could indicate inadequate water turnover in the tank.*	☐ Yes ☐ No ☐ N/A	Date Inspected		
• Do you utilize tank management/operational procedures? e.g., cleaning schedule, set operational levels of your tank (high and low), etc?				☐ Yes ☐ No
• Has the residence time of your tank(s) increased or decreased? i.e., are tanks being filled/drained more or less often?				☐ Yes ☐ No
• What is the longest approximate residence time in the storage tanks?				☐ Hours ☐ Days
4. Does your system have a regular distribution flushing program?				☐ Yes ☐ No
• If yes, what was the last date that flushing operations were performed?				
• If yes, have you been changing your distribution flushing procedures?				☐ Yes ☐ No
5. Do you have chlorine residual data from near the disinfection byproduct (DBP) sample location?				☐ Yes ☐ No
• If yes, what was the chlorine residual during or closest to the DBP sample collection date above?		Date Measured		
• If no, please measure the chlorine residual at the DBP sample location.		Date Measured		
6. Do you have water temperature data near the disinfection byproduct (DBP) sample location?				☐ Yes ☐ No
• If yes, what was the water temperature during or closest to the DBP sample collection date above?		Date Measured		
• If no, please measure the water temperature at the DBP sample location.		Date Measured		
7. Do you have pH level data near the disinfection byproduct (DBP) sample location?				☐ Yes ☐ No
• If yes, what was the pH during or closest to the DBP sample collection date above?		Date Measured		
• If no, please measure the pH at the DBP sample location.		Date Measured		

8. Does your system provide additional chlorine (e.g. booster chlorination) in the distribution system?				☐ Yes ☐ No
• What is the chlorine residual at the nearest location **before** additional chlorine is added?		mg/L	Date Measured	
• What is the chlorine residual at the nearest location **after** additional chlorine is added?		mg/L	Date Measured	
9. Did you have customer complaints about water quality during the OEL exceedance month?				☐ Yes ☐ No
• If yes, what was the general nature of the water quality complaints?				

G. CONTROL PLAN ☐ If this submittal is an update from prior reports, **skip to Section H.**

1. In terms of your source water management, do you plan to monitor or implement best management practices in your source water?	☐ Yes ☐ No
• Does your system have a source water management or wellhead protection plan?	☐ Yes ☐ No
• If there isn't a wellhead protection plan, are you interested in developing one?	☐ Yes ☐ No
• Does your system implement any best management practices (BMPs) in your aquifer recharge area to minimize impacts to the groundwater?	☐ Yes ☐ No
• Does your system monitor for any water quality parameters in the source water?	☐ Yes ☐ No
• Are there any sources of pollution near your wells that concern you?	☐ Yes ☐ No
2. Regarding your existing equipment and infrastructure, do you plan to make **operational adjustments** to improve the quality of your drinking water for DBP control?	☐ Yes ☐ No
• If yes, are you planning to adjust your chemical feeds?	☐ Yes ☐ No
• If yes, are you planning to change any chemical products?	☐ Yes ☐ No
• If yes, are you planning to start up any existing process equipment not used during the sampling period indicated in Section A?	☐ Yes ☐ No
• If yes, are you planning to adjust your chlorine dosage?	☐ Yes ☐ No
• If yes, are you planning to adjust any existing aeration processes in your drinking water treatment plant?	☐ Yes ☐ No
• If yes, are you planning to make changes to your flushing program?	☐ Yes ☐ No
• If yes, are you planning to increase your monitoring of chlorine residuals in the distribution system?	☐ Yes ☐ No
• If yes, are you planning to make other changes to your operations?	☐ Yes ☐ No
• If you are planning other operational changes, please describe:	

3. In regard to upgrades for your equipment or infrastructure, do you plan to make any **capital improvements** to your system to improve water quality for DBP control?	☐ Yes ☐ No
• If yes, are you planning to replace or install new feed pumps?	☐ Yes ☐ No
• If yes, are you planning to add new chemicals to your system?	☐ Yes ☐ No
• If yes, are you planning to add aeration to any of your storage tanks?	☐ Yes ☐ No
• If yes, are you planning to install a new treatment process to address DBPs?	☐ Yes ☐ No
• If yes, are you planning to switch your disinfectant?	☐ Yes ☐ No
• If yes, are you planning to add new water mains to reduce dead-ends?	☐ Yes ☐ No
• If yes, are you planning other upgrades to your public water system?	☐ Yes ☐ No
4. Please provide a short statement about the control plan that your system will implement to reduce disinfection byproducts (DBPs):	

H. CONTROL PLAN UPDATES

Only fill out this section if you filled out an operational evaluation report (OER) in the previous quarter, or the data provided from Sections C.2 and C.3 instructed you to complete this section.

1. Does your plan only rely on natural decreasing water temperatures to bring your locational running annual average (LRAA) calculated value within compliance?	☐ Yes ☐ No
2. Are you continuing with the exact same control plan in your previous report?	☐ Yes ☐ No
• If yes, please provide an update on the status of accomplishing the items identified in the previous control plan:	
3. Are you planning to use other methods not identified in your previous report to lower your disinfection byproducts (DBPs)?	☐ Yes ☐ No
• If yes, are these new methods going to be implemented in the source watershed? *(If yes, fill out Section D Source Water above)*	☐ Yes ☐ No
• If yes, are these new methods going to be implemented in the water treatment process? *(If yes, fill out Section E Water Treatment above)*	☐ Yes ☐ No
• If yes, are these new methods going to be implemented in the distribution system or the water storage tanks? *(If yes, fill out Section F Distribution System above)*	☐ Yes ☐ No

4. Please provide a short statement about the control plan updates and status that your system is planning or implementing to reduce disinfection byproducts (DBPs):

I certify that the information in this entire report, including any attachments, is true and accurate to the best of my knowledge.

Signature: _____ Date: _____

Printed Name: _____ License #: _____

Contact Email address: _____ Contact Phone Number: _____

Send the completed report to EPA Region 8 no later than 90 days after being notified of the analytical results that caused you to exceed the operational evaluation level using one of the following:

Mail: Stage 2 DBPR Rule Manager
Mail Code: 8WD-SDR
US EPA Region 8
1595 Wynkoop Street
Denver, CO 80202-1129

Fax: 1-(303) 312-7517 Attn: Stage 2 DBPR Rule Manager

Email: R8DWU@epa.gov, and include your PWS ID# and DBP OEL in the subject line.