



Stage 2 Disinfectants and Disinfection Byproducts Rule Operational Evaluation Level (OEL) Report for Surface Water System

PWS Name: _____

PWS ID: OK _____

County: _____

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 Number: _____

Contact Phone Number: _____

Send the completed report to DEQ no later than 90 days after being notified of the analytical results that caused you to exceed the operational evaluation level via one of the following. Explanations may need additional documentation.

Mail: **DBP Coordinator**
Department of Environmental Quality
Water Quality Division
P.O. Box 1677
Oklahoma City, OK 73101-1677

Fax: **405-702-8101 Attn: DBP Coordinator**

Email: dbpr@deq.ok.gov with the subject line "OEL Report."

If you have questions regarding the OEL Report, please contact the DBP Coordinator at (405) 702-8171; or email or mailing address above.

Any reference to "current quarter" sample(s) is the sample or samples taken during the three months before the date of the request letter.

Review EPA's *Stage 2 Disinfectants and Disinfection Byproducts Rule Operational Evaluation Guidance Manual* at http://www.epa.gov/ogwdw/disinfection/stage2/pdfs/draft_guide_stage2_operationalevaluation.pdf to aid you in completing this form.

Acronyms

DBP= Disinfectant By-Products

PWS= Public Water Supply

TOC= Total Organic Carbon

Section A: Calculate Your Operational Evaluation Level (OEL) exceedance.

1. Check that all of your TTHM and HAA5 samples were handled correctly and reported by your certified lab to SDWIS. (If you have questions about properly collecting a TTHM and HAA5 sample please contact your certified lab.)

2. Use the table below to calculate the OEL at the location(s) of exceedance. An OEL exceedance occurs if the OEL is above 0.080 mg/L for TTHMs and 0.060 mg/L for HAA5.

Following equation is used to calculate your OEL:

$$\frac{\text{Sample Results Two Quarters Ago} + \text{Sample Results of Previous Quarter} + (\text{Sample Results of Current Quarter} * 2)}{4}$$

*For any quarter you did not take samples, divided by one less number.

*If your calculations show that you did not have an exceedance, please submit calculations to DEQ to verify

		Quarter			Operational Evaluation Value D=(A+B+(2*C))/4
		Results From Two Quarters Ago (A)	Prior Quarter's Results (B)	Current Quarter (C)	
Locational Code of exceedance	Date sample collected				
	TTHM				
	HAA5				
	TTHM				
	HAA5				
	TTHM				
	HAA5				
	TTHM				
	HAA5				

3. Were you able to determine the cause of the exceedance at each location?

Locational Code	Yes	No	If yes, what do you believe was the cause?

4. If you experienced an exceedance, how did you attempt to correct it?

5. Please review all of your sample sites and verify that they meet the following requirements:

- a. Sample sites are located at the point of entry point or at the farthest point and represent the distribution system.
- b. Sample sites have regular water usage, such as a full-time residential house or sample station.
- c. Sample sites are not at a deadend line.

If the sample site(s) do not meet all of the requirements or you have concerns about your sample site(s) please contact the DBP coordinator or your Public Water Supply District Engineers.

Section B: Source

1. What is your source(s) of water? _____
2. Does your system have a source water protection plan? Yes No Don't Know
If yes, when was the last time it was updated? _____
3. What potential sources of organic contamination were identified in your source water protection plan?
 Abandoned oil/gas well Abandoned water well Agriculture practices Fertilizer/pesticide
 Wastewater facility-public or private Other _____
4. Have there been any changes to your source(s) during the three months prior to the last DBP sampling? Mark all that may apply and provide detail information.
 Drought- What was the change in the water level? _____
 Was there a water restriction due to the drought? _____
 Excess rainfall- What was the change in the water level? _____
 Were there any problems due to excess rainfall? _____
 Algae bloom- Did you add chemicals at the lake or water treatment plant to address the bloom? _____
 Fire- How close to the lake was the fire? _____
 Other- _____
5. Please identify the type of intake: Fixed-single level Fixed- multi level Floating/ moveable
6. Did you have any problems at the intake pump? _____
7. Did you notice an increase or decrease in the pump rate during the three months prior to the last DBP sampling?
8. Are you testing for turbidity, temperature, pH and alkalinity at the source? Yes No If yes, fill out the table with the average of the tests performed during the three months prior to the last DBP sampling or attach sample logs.

Test	1 st Month of Quarter	Average	2 nd Month of Quarter	Average	3 rd Month of Quarter	Average
Turbidity						
Temperature						
pH						
Alkalinity						

Section C: Water Treatment Plant(s)

1. Check all that apply to your plant and provide information:
 Sedimentation Basins: The water plant has how many sedimentation basins? _____ Detention Time _____
 How often are the basins cleaned? _____ When was the last time they were cleaned? _____
 Any recent problems? _____
- Chemical Feed/ Rapid Mix
 What chemicals do you add at the plant? _____
 Are these chemicals added to address your DBPs formation/ TOC removal? Yes No Don't Know
 Were there problems with the chemical feed during the three months prior to the last DBP sampling? Yes No
 If yes, describe _____
- Clarifiers
 How many clarifiers does the plant have? ____ What kind of clarifiers? _____ Detention Time _____
 How often are the clarifiers cleaned? _____ When was the last time they were cleaned? _____
 Any recent problems? _____
- Filters: How many filters does the plant have? _____ What kind of filter(s)? _____
 What kind of media? Single, dual, or multi (circle one) What is surface area of the filter(s)? _____
 Does the filter include a layer of GAC? Yes No Don't Know
 What is the designed flow rate of the filters? _____ What is the average or max flow rate? _____
 How often are the filters backwashed? _____ When was the filter media last replaced? _____
 Any recent problems? _____
- Clearwell: How many clearwells does the plant have? _____ What are their storage capacities? _____
 What is the orientation and height of the inlet and outlet pipe and are they baffled? _____
 When were the clearwells last cleaned? _____

Please list any other treatment process that have not already been covered and/or any other maintenance issues.

2. Have you had problems or changed the disinfectant (chlorine, chlorine dioxide or chloramines) during the three months prior to the last DBP sampling? _____
3. Is the water plant in compliance with TOC removal ratio? Yes No If no, what are you doing to meet the treatment requirements? _____
4. Is the finished TOC sample being taken before your effluent turbidity meter? Yes No Don't Know
5. Did you recycle water from the backwash pond? Yes No Don't Know
What was the percentage of recycled water used? _____ Don't Know
6. Are you testing for turbidity, temperature, chlorine, pH, and alkalinity at the water plant? Yes No If yes, fill out the table with the average of the tests performed during the three months prior to the last DBP sampling or attach sample logs:

Test	1 st Month of Quarter	Average	2 nd Month of Quarter	Average	3 rd Month of Quarter	Average
Turbidity						
Temperature						
chlorine						
pH						
Alkalinity						

*Identify the month associated with the average.

Section D: Waterlines

1. How many miles of waterlines make up your system? _____ Don't Know
2. What is the approximate distance between the point of entry and farthest point in the system? _____
3. What is the current water loss of your system? _____ Don't Know
4. What is the age of the waterlines? Newest: _____ Oldest: _____
5. What type(s) of materials make up your system's waterlines? _____
6. During the three months prior to the last DBP sampling, did you add any new waterlines or meters? Yes No
If yes, how much or many? _____
7. Was there an increase or decrease in water demand during the three months prior to the last DBP sampling?
Do you know the cause of the change? _____
8. How many waterline breaks did your system have during the three months prior to the last DBP sampling? _____
9. Did any of those waterline breaks cause a loss of water pressure (below 25 psi)? Yes No Don't Know
If yes, for how long? _____
Did you receive any dirty water complaints after the loss of water pressure? Yes No Don't Know
10. How often do you flush all of your system's dead ends? _____ Don't Know
If you have a flush log please attach a copy.
11. How many deadends does your system have? _____ Don't Know
12. How many deadends have flush valves? _____ Don't Know
13. Does your system add chemicals to coat or clean the waterline? Yes No Don't Know
If yes, name of chemical. _____

Section E: Testing Within the Distribution System

1. Are you testing for TTHMs or HAA5s at other locations beside what is required for compliance? Yes No
If yes, please list results and general locations in the system: _____
2. Are you testing for chlorine residual, temperature, pH and alkalinity in the distribution system? Yes No If yes, fill out the table or attach sample logs.

Test	Date	Beginning	Middle	End
Chlorine residual				
Temperature				
pH				
Alkalinity				

*Please include sample results from the same day at different parts of the distribution system so that the results can be compared.

3. Are you tracking water age? Yes No
If yes, what was the average water age at the farthest point in the system during the three months prior to the last DBP sampling? _____

Section F: Chlorine Booster Station

- Does your system have a chlorine booster station in the distribution system? Yes No
 If no, please skip the following section. If yes, how many? _____ Any recent addition? Yes No
- On average, what was the chlorine residual before the booster station(s)? _____ mg/L Free or Total
 What was the chlorine residual after the booster station(s)? _____ mg/L Free or Total
- Did you test for DBPs directly before or after the booster station(s)? Yes No If yes, what was the result before the station _____ and after the station _____
- Did you need to increase or decrease the amount of chlorine being added during the three months prior to the last DBP sampling?

Section G: Finished Water Storage

- Does your system have finished water storage in the distribution system? Yes No
 If no, please skip the following section. If yes, how many? _____ Any recent addition? Yes No
- Please provide information about each finished water storage(s):

Tower Name	Date of Last Inspection	Date of Last Cleaning	Single Inlet/Outlet pipe	Drained Recently?	Tower height or Storage capacity	Is there aeration or mixing?
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No

- Did you test for DBPs at the finished water storage(s)? Yes No If yes, what were the results before _____ or after _____

Section H: Groundwater Wells

- Does your system have groundwater well(s)? Yes No
 If no, please skip the following section. If yes, how many? _____ Any recent addition? Yes No
- Does your system have a Wellhead Protection Plan? Yes No When was it last updated? _____
- What is the name of the aquifer the well(s) pull from? _____ Don't Know
- Were there problems with the well(s) due to the weather changes during the three months prior to the last DBP sampling?
 Yes No If yes, what? _____
- Was there an increase or decrease in the well(s)' pump rate? Why? _____
- What potential sources of organic contamination were identified in your wellhead protection plan? _____

7. Fill out the following table with information about each well:

Well Name	Age (Yrs.)	Depth	Cl2 Added	Construction Defects
			<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Yes <input type="checkbox"/> No	
			<input type="checkbox"/> Yes <input type="checkbox"/> No	

Section I: Alternative Treatment

- Does your system have other treatment processes, which were not covered in previous sections? Yes No.
 If yes, please list the type: _____

Section J: Minimizing Future DBP Formation and Returning to Compliance

- How does your system plan to decrease DBP formation and return to compliance? _____

