

Site ID	Analyte	Results from two quarters ago (mg/L)	Results from prior quarter (mg/L)	Results from current quarter (mg/L)	Operation Evaluation Level (OEL) (mg/L)	Mark "x" if Column D Exceeds 0.080 mg/L for TTHMs or 0.060 mg/L for HAA5
		A	B	C	$D = (A+B+(2*C))/4$	
2DBP-01	TTHM	.055	.054	.081	0	.068
	HAA5				0	
	TTHM				0	
	HAA5				0	
	TTHM				0	
	HAA5				0	
	TTHM				0	
	HAA5				0	

**3. Source Water Quality – (see chapter 5 of the EPA OEL Guidance Manual)**

Did source water quality factors contribute to exceedance? (Check all that apply.)  
 Yes  No  Unknown

Point or nonpoint source contamination       Stream flow rates/reservoir lower than normal  
 New source placed on-line       Heavy rainfall or snowmelt  
 Stream flow rates/reservoir level higher       Lake or reservoir turnover  
 Storage time longer than normal       Long-term drought  
 Algae bloom in source water       Inactivation of Giardia and/or viruses high  
 Spills of industrial/sewage in the watershed

Other/Explain: Type Explanation

**4. Treatment Change/Problems – (see chapter 4 of the EPA OEL Guidance Manual)**

Did water treatment factors contribute to exceedance? (Check all that apply.)  
 Yes  No  Unknown

Problem with clearwell operation       Abnormal flow rates/short-circuiting  
 Abnormal influent turbidity       Sludge blanket/carryover problems  
 Abnormal influent temperature       Filters operated beyond capacity  
 Pre-disinfectant added/changed       Excessive filter run-time  
 Disinfectant feed/leaving the plant(s) higher than normal       Abnormal pH/Alkalinity  
 Increased filter effluent turbidity       Total organic carbon (TOC) removal problems  
 Coagulation/sedimentation problems       DBP precursors (TOC, bromide, etc.) higher than normal

Other/Explain: Type Explanation

**5. Distribution System – (see chapter 3 of the EPA OEL Guidance Manual)**

Did distribution system factors contribute to exceedance? (Check all that apply.)

Yes  No  Unknown

- |                                                                    |                                                                                     |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Flushing activities            | <input type="checkbox"/> High volume customer usage                                 |
| <input type="checkbox"/> Disinfectant residual lower than normal   | <input type="checkbox"/> Water temperature higher than normal                       |
| <input type="checkbox"/> Disinfectant residual higher than normal  | <input type="checkbox"/> Low volume customer range (contributing to high water age) |
| <input type="checkbox"/> Water quality at master meter exceeds MCL | <input type="checkbox"/> Valves operated in vicinity                                |
| <input type="checkbox"/> Fires or hydraulic disturbance            | <input type="checkbox"/> Breaks or line replacements                                |
| <input type="checkbox"/> Booster chlorination                      |                                                                                     |

Other/Explain: Type Explanation

**6. Storage Tank Operations – (see chapter 3 of the EPA OEL Guidance Manual)**

Did water storage operations/factors contribute to exceedance? (Check all that apply.)

Yes  No  Unknown

- |                                                            |                                                                               |
|------------------------------------------------------------|-------------------------------------------------------------------------------|
| <input type="checkbox"/> Tank removed from service         | <input type="checkbox"/> Improper level fluctuations                          |
| <input type="checkbox"/> Tank cleaned/maintenance          | <input checked="" type="checkbox"/> Excessive storage capacity                |
| <input type="checkbox"/> Excessive tank draw-down          | <input type="checkbox"/> Excessive ambient temperature                        |
| <input type="checkbox"/> Tank upstream from sample site    | <input type="checkbox"/> Disinfectant residual low in tank                    |
| <input type="checkbox"/> Operated <i>last in—first out</i> | <input type="checkbox"/> Disinfected raw water stored for unusually long time |

Other/Explain: Type Explanation

**7. Indicate steps that could be considered to minimize future TTHM and/or HAA5 exceedances – (see chapter 6 of the EPA OEL Guidance Manual)**

(Attach additional pages if necessary.)

**Due to infrastructure design issues, classification issues of the first user which require higher Cl2 requirements for contact time, over built distribution system, until new infrastructure is installed it has and will contribute to be an issue with exceedance of MCL. City has just recently completed a full distribution flush, lowered the storage tank levels due to less fire risk now that the summer drought has passed , and has hired more staff to facilitate more frequent water line flushing.**

For questions about the TTHM/HAA5 OEL, contact your State/County/Ag regulatory contact. More information about OELs can be found at <http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/Rules/Stage2/Pages/opeval.aspx>